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MONTHLY WEATHER REVIEW

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RATES OF PRECIPITATION FROM PSEUDO-ADIABATICALLY ASCENDING AIR

By A. K. SHOWALTER

[Hydrometeorological Section, Weather Bureau, Washington, November 1943]

IN the MONTHLY WEATHER REVIEW for October 1935 J. R. Fulks published a method for the calculation of the rate of precipitation from adiabatically ascending air.[1] A simpler method for computing rates of precipitation can be developed by using a storage equation for a vertical column of saturated air with pseudo adiabatic lapse rate.

In such a column of unit cross section, the rate of moisture inflow at the bottom, minus the rate of moisture outflow at the top, equals the rate of storage or the rate of precipitation.

Let

ρ_w=absolute humidity, g/m³,
ρ=density of air, g/m³,
V_z=vertical velocity, m/s,
I=rate of precipitation, in./hr.

Then, using the subscript 0 to refer to the bottom of the column, 1 to refer to the top,

$$\text{Rate of inflow}=V_{z_0}\rho_{w_0},$$

$$\text{Rate of outflow}=V_{z_1}\rho_{w_1},$$

$$I=(V_{z_1}\rho_{w_0}-V_{z_1}\rho_{w_1})\frac{3600}{10}\times 0.3937$$

$$=\frac{(V_{z_0}\rho_{w_0}-V_{z_1}\rho_{w_1})}{7}\text{ in./hr., approximately}$$

If no convergence or divergence occurs between top and bottom of the column, the mass of air flowing upward per unit time will be constant (neglecting the loss of water by precipitation) and equal to

$$V_{z_0}\rho_0=V_{z1}\rho_1$$

$$\therefore V_{z1}=\frac{\rho_0}{\rho_1}V_{z_0}$$

However, if x is the mixing ratio, then

$$\rho_{w_0}=x_0\rho_0$$

and

$$\rho_{w_1}=x_1\rho_1.$$

Substituting,

$$I=\frac{V_{z_0}\rho_0(x_0-x_1)}{7}\text{ in./hr.}$$

The x values used should be the actual mixing ratios, that is, the values as read off the pseudo-adiabatic chart divided by 10^3. The density can be obtained from the formula $\rho=348.4\ p/T$, where p is in millibars and T is absolute temperature. Unlike Fulks' method, the equation involves no neglect of the variation of density with height; the results of the two methods therefore differ least in the unit 100-meter depth used by Fulks. For greater depths, the difference is larger, Fulks' values being the lower.

[1] J. R. Fulks, Rate of Precipitation from Adiabatically ascending Air, MO. WEA. REV., 63:291-294, 1935.

Note by Editor.—In a note by H. R. Byers, appended to this paper, an alternative formula is derived which is stated to differ only inappreciably from Fulks' result, but actually it may give values considerably in error, as the following examples show:

T	P	Fulks	Byers
	Mb.	*Mm./hr.*	*Mm./hr.*
0°	500	0.44	0.61
10	900	.75	1.09

576413—44——1

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR JANUARY 1944

[Climate and Crop Weather Division, J B. KINCER, in charge]

AEROLOGICAL OBSERVATIONS

NOTICE.—RAOB tabular data for January 1944 (table 1) will be published in the February REVIEW.—EDITOR

TABLE 2.—*Free-air resultart winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during January 1944. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°), velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (538 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (870 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (17 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	241	1.5	30	258	4.3	26	291	2.1	31	239	5.7	30	262	2.9	31	315	1.7	28	137	1.6	27	249	4.2	29	237	1.4	29	298	1.6	31	246	1.6	30	103	0.5	---	---	---
500							26	306	2.7										28	165	2.1	27	250	6.2	29	228	3.8	29	309	2.8	31	245	3.2						
1,000	29	238	1.3				23	301	2.7				30	285	5.3	31	354	0.5	19	196	3.4	21	245	7.7	27	260	6.7	28	285	4.5	26	250	5.5						
1,500	29	251	2.6				23	267	5.3	31	256	8.6	30	296	7.9	31	151	1.8	17	223	4.1	16	256	8.4	23	284	8.3	27	279	6.0	23	264	7.7						
2,000	26	270	4.2	30	261	1.3	22	277	8.0	31	284	8.1	27	301	9.2	31	199	2.0	14	272	4.8	14	266	8.8	19	287	8.9	24	291	7.9	22	274	10.6	30	270	0.1	---	---	---
2,500	26	273	5.0	30	286	3.7	21	281	8.8	29	281	7.8	26	298	10.4	29	243	3.8	13	232	6.5	---	---	---	13	299	9.0	23	289	9.2	18	279	11.8	30	278	2.1	---	---	---
3,000	23	265	7.5	30	272	5.4	19	279	10.9	26	290	9.3	24	297	11.6	28	266	5.4	12	302	7.7	---	---	---	10	303	10.2	21	286	12.6	17	282	14.4	30	290	4.4	---	---	---
4,000	20	272	8.7	26	272	8.0	18	280	13.1	23	294	11.7	22	299	13.7	26	275	5.8	12	291	10.2	---	---	---	---	---	---	17	285	17.2	---	---	---	30	299	7.5	---	---	---
5,000	20	272	10.1	20	276	10.8	14	283	14.6	22	293	11.2	20	305	14.8	22	303	6.7	12	283	14.4	---	---	---	---	---	---	16	282	19.1	---	---	---	26	290	10.5	---	---	---
6,000	18	272	11.4	16	275	13.1	12	285	19.0	17	292	12.0	19	305	18.5	20	320	5.5	11	279	15.4	---	---	---	---	---	---	12	285	23.3	---	---	---	23	276	13.4	---	---	---
8,000	10	271	19.4	10	282	14.6	---	---	---	---	---	---	14	318	16.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	15	270	12.5	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	12	314	18.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (410 m.)			Miami Fla. (15 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	209	0.2	29	313	1.7	---	---	---	30	253	3.1	29	34	1.5	30	259	3.2	31	70	1.2	29	58	0.4	30	83	0.6	31	104	1.6	21	231	1.0	28	264	1.0	30	314	4.1
500													29	290	1.5	30	260	4.3				29	162	0.4	30	71	0.6	31	55	1.0	21	232	1.2	28	249	1.8	30	299	4.2
1,000										30	248	6.1	25	270	2.2	25	266	5.6	31	55	1.7	27	268	2.4	30	144	3.8	30	260	0.4	18	265	2.3	26	259	2.8	27	300	8.8
1,500				29	312	1.6				30	261	9.3	25	271	4.4	22	282	6.5	31	4	0.6	27	277	5.0	27	183	3.5	29	254	2.8	16	293	4.0	24	261	5.8	22	295	10.9
2,000	31	236	0.4	29	300	0.3				30	277	9.7	23	275	7.0	20	289	8.1	31	251	0.8	22	273	8.8	27	210	4.3	26	258	3.8	15	289	6.1	23	275	7.8	17	291	12.6
2,500	31	293	1.0	28	299	0.8				28	286	9.1	21	282	9.1	18	294	9.6	28	270	2.2	21	282	10.1	25	228	3.8	23	265	5.0	12	281	8.8	23	280	9.6	13	297	12.5
3,000	29	288	1.8	28	249	3.0				26	284	9.3	21	281	10.3	17	294	10.0	26	285	3.3	21	285	11.0	22	255	3.4	20	270	6.1	11	271	10.5	22	285	11.1	10	302	13.0
4,000	24	319	4.4	14	297	4.9				22	292	8.7	21	279	12.4	11	298	15.2	24	294	5.5	18	276	13.5	18	261	5.9	18	263	9.4	---	---	---	21	277	15.6	---	---	---
5,000	23	301	8.1	10	282	6.9				20	286	10.6	19	273	14.5	---	---	---	21	294	8.7	15	282	13.5	14	285	5.9	17	258	10.6	---	---	---	18	279	19.0	---	---	---
6,000	19	292	9.8	---	---	---	---	---	---	16	305	10.4	15	282	16.4	---	---	---	19	285	10.9	13	284	16.9	13	282	5.9	15	261	12.9	---	---	---	16	277	24.0	---	---	---
8,000	14	285	12.4	---	---	---	---	---	---	---	---	---	12	283	24.6	---	---	---	15	267	16.2	---	---	---	11	309	9.9	13	267	19.0	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (388 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich (230 m.)			Seattle, Wash. (12 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	240	1.8	28	260	0.8	29	264	2.1	31	123	0.4	29	215	2.3	30	274	1.7	30	275	2.0	27	307	0.6	31	264	2.3	25	244	1.7	28	161	1.2	31	149	0.5	28	304	1.8
500	29	171	1.1	28	259	0.7	29	250	2.8	31	71	0.3	---	---	---	30	257	3.5	30	266	3.2	27	236	0.2	31	255	1.6	25	248	3.6	28	177	3.7	---	---	---	28	287	3.5
1,000	28	212	1.5	28	277	1.1	27	265	5.1	31	75	0.8	29	325	2.4	30	269	5.1	25	280	7.2	23	216	2.3	30	78	0.8	17	279	7.8	26	189	7.3	31	177	2.1	27	289	6.1
1,500	26	237	2.2	24	310	3.5	26	288	7.3	31	103	1.3	29	314	5.5	27	286	7.8	23	295	9.6	20	264	4.0	27	31	1.2	11	292	8.9	24	204	9.2	28	209	5.5	27	294	8.9
2,000	21	202	0.6	22	306	5.6	25	292	8.4	29	133	0.7	28	308	8.9	25	292	9.0	23	300	12.0	20	282	5.3	25	4	1.4	---	---	---	20	213	8.8	24	232	6.8	25	290	11.3
2,500	18	334	0.9	22	304	7.0	24	291	8.6	28	238	1.3	27	303	10.3	24	288	10.5	21	301	11.5	19	275	7.6	24	316	2.5	---	---	---	16	218	8.4	22	244	8.1	24	283	13.8
3,000	18	302	2.2	21	299	8.6	24	297	9.7	28	279	2.8	26	306	11.7	24	281	13.4	18	302	13.8	18	287	9.2	23	294	3.1	---	---	---	14	226	6.8	22	245	8.7	22	284	14.7
4,000	17	318	3.2	20	296	10.3	23	299	12.4	27	282	7.1	26	299	12.2	22	283	16.8	15	304	19.2	17	286	12.0	19	286	4.6	---	---	---	---	---	---	20	262	9.3	18	277	16.5
5,000	14	311	4.7	19	290	13.5	22	294	14.9	23	278	8.9	24	301	13.0	19	281	18.0	13	306	23.9	15	297	15.6	16	272	7.0	---	---	---	---	---	---	15	267	6.7	---	---	---
6,000	11	293	5.9	15	290	15.3	20	300	18.0	21	280	11.1	20	314	13.4	16	286	20.6	12	309	26.5	14	298	19.4	12	282	10.0	---	---	---	---	---	---	10	118	7.2	---	---	---
8,000	---	---	---	10	283	18.6	10	294	17.6	16	285	14.7	14	329	20.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	10	271	16.7	11	314	22.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free-air wind velocities, (m. p. s.) for different sections of the United States based on pilot-balloon observations during January 1944*

Section	Surface to 2,500 meters (m. s. l.)					Above 2,500 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	50.8	NW.	2,265	30	New York, N. Y.	48.0	NNW.	2,985	30	Boston, Mass.	80.5	NW.	9,200	28	Caribou, Maine.
East Central [2]	40.4	WNW.	2,500	28	Huntington, W. Va.	67.0	WSW.	5,000	29	Huntington, W. Va.	76.0	WNW.	11,179	30	Huntington, W. Va.
Southeast [3]	27.2	WNW.	2,500	3	Jacksonville, Fla.	45.0	WNW.	4,691	3	Jacksonville, Fla.	80.0	WSW.	14,287	22	Miami, Fla.
North Central [4]	43.6	NW.	2,222	18	Bismarck, N. Dak.	57.6	W.	4,995	10	St. Paul, Minn.	85.5	NNW.	7,875	22	St. Paul, Minn.
Central [5]	42.0	WNW.	2,500	27	North Platte, Nebr.	46.0	WSW.	3,449	27	Des Moines, Iowa.	62.0	WSW.	11,502	14	Indianapolis, Ind.
South Central [6]	33.5	NNW.	1,566	5	Oklahoma City, Okla.	44.0	NNW.	4,927	19	Dallas, Tex.	78.0	WSW.	10,341	4	Big Spring, Tex.
Northwest [7]	38.2	NW.	1,450	17	Glasgow, Mont.	52.0	SSW.	4,782	13	Burns, Oreg.	76.4	NNW.	9,660	18	Glasgow, Mont.
West Central [8]	37.0	NW.	1,720	24	Oakland, Calif.	48.0	NNE.	5,000	25	Sacramento, Calif.	68.0	NW.	8,590	10	Reno, Nev.
Southwest [9]	27.7	W.	627	24	San Diego, Calif.	45.0	WSW.	5,000	3	Raton, New Mex.	68.0	NNW.	9,080	25	Santa Maria, Calif.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

UPPER-AIR TEMPERATURE, PRESSURE, AND RELATIVE HUMIDITY DATA

For the Period

DECEMBER 1942 THROUGH DECEMBER 1943 AND ANNUAL SUMMARIES FOR 1942 AND 1943

SINCE military restrictions on the dissemination of weather information have been lifted, it is now possible to publish all back RAOB data, except those for Alaska, which have not heretofore been published. RAOB data and upper-air charts for the period, December 1942 through December 1943, are accordingly included in this issue. Charts for January 1944 are also included, but tabular data for that month will be published in the February REVIEW.

All observations were taken near 11 p. m., E. S. T., except at Mazatland and Tapachula, Mexico, near 9 p. m., and at Tacubaya, Mexico, near 10 p. m.

"Number of observations" refers to pressure only, as temperature and humidity data are sometimes missing for some observations at certain levels. Relative humidity data are not used in daily observations when the temperature is below −40° C.

None of the means included in these tables are based on less than 15 surface or 5 standard-level observations.

Means for observations obtained by the electric hygrometer have been adjusted to compensate for the values occurring below the operating range of the humidity element.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during December 1942

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (8 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	839	5.0	54	31	1,020	13.1	86	31	985	4.7	79	30	956	−10.1	88	30	919	1.4	83	31	1,017	15.8	87	30	990	−4.1	84
500					31	961	13.2	74	31	961	5.5	77									31	960	17.0	76	30	956	−5.3	84
1,000					31	906	12.3	63	31	904	6.0	69	30	897	−7.4	86	30	905	1.9	80	31	905	14.7	68	30	897	−7.1	85
1,500					31	853	10.9	57	31	851	5.6	63	30	841	−6.7	81	30	850	0.0	79	31	853	12.8	60	30	840	−8.8	83
2,000	31	800	4.6	55	31	803	8.6	51	31	800	4.1	57	30	789	−7.8	75	30	798	−0.8	73	31	803	11.0	50	30	788	−9.5	77
2,500	31	753	1.6	54	31	756	6.4	45	31	752	2.5	53	29	739	−9.8	72	30	750	−3.1	69	31	756	8.9	43	30	738	−10.9	72
3,000	31	707	−1.0	55	31	711	4.1	38	31	707	0.0	49	29	692	−12.4	69	30	703	−5.9	67	31	712	6.3	38	30	692	−13.0	71
4,000	31	623	−6.9	55	31	628	−1.0	35	31	623	−5.4	44	29	607	−18.7	64	30	618	−11.9	66	31	629	0.0	33	30	606	−17.8	70
5,000	31	548	−13.0	54	31	555	−6.7	32	30	548	−12.0	41	28	530	−24.9	62	29	542	−17.9	60	31	555	−5.8	30	29	529	−23.9	67
6,000	30	479	−19.8	51	31	486	−13.0	29	29	480	−18.0	38	26	462	−31.9	60	29	473	−24.6	57	30	487	−12.6	28	27	461	−29.5	65
7,000	29	418	−27.3	49	31	426	−20.5	27	29	419	−24.6	37	25	400	−39.1	57	28	411	−31.7	55	29	427	−19.7	28	27	400	−36.2	63
8,000	29	363	−35.0	49	30	371	−27.7	26	28	365	−31.6	38	23	344	−46.3	----	26	356	−39.1	54	29	372	−26.6	28	26	345	−42.1	----
9,000	26	314	−42.3	----	30	322	−34.7	26	28	316	−39.2	37	22	295	−52.4	----	26	307	−46.4	----	29	323	−33.9	28	22	297	−47.4	----
10,000	26	270	−48.3	----	30	279	−41.7	----	28	273	−46.0	----	22	252	−55.8	----	24	264	−52.7	----	29	280	−41.3	----	21	255	−51.2	----
11,000	25	232	−53.7	----	29	240	−48.4	----	28	234	−51.9	----	18	216	−56.6	----	19	226	−56.1	----	29	241	−48.0	----	17	219	−52.4	----
12,000	24	198	−56.7	----	28	206	−54.8	----	24	200	−56.6	----	18	184	−55.8	----	15	192	−57.0	----	28	207	−53.9	----	15	186	−53.3	----
13,000	20	169	−57.3	----	25	175	−60.4	----	20	171	−60.0	----	17	157	−54.3	----	11	165	−56.3	----	28	177	−59.0	----	12	159	−54.9	----
14,000	19	144	−60.1	----	19	149	−65.1	----	16	146	−63.1	----	13	134	−55.0	----	10	141	−56.9	----	27	150	−63.8	----	10	135	−54.9	----
15,000	17	122	−62.8	----	16	126	−69.0	----	13	123	−65.6	----	8	114	−55.1	----	9	120	−58.0	----	26	127	−68.1	----	6	114	−56.1	----
16,000	14	104	−64.4	----	12	107	−73.2	----	9	104	−68.9	----					6	102	−58.0	----	22	108	−72.2	----	6	98	−57.7	----
17,000	13	88	−64.2	----	9	90	−76.8	----									6	87	−57.5	----	19	91	−74.5	----				
18,000	11	75	−63.3	----	7	75	−77.1	----													14	76	−75.3	----				
19,000	6	64	−64.1	----																	6	65	−74.3	----				

	Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)			
Surface	30	988	−12.6	87	28	1,018	8.5	82	31	836	−0.1	61	31	991	−4.9	85	31	883	8.4	57	31	810	−2.5	66	29	883	−2.4	71
500	30	948	−13.2	86	28	960	8.8	76					31	956	−5.7	84												
1,000	30	888	−14.3	86	28	904	8.4	71					31	897	−6.7	84												
1,500	30	832	−14.5	83	28	851	7.1	65					31	842	−7.4	77	31	851	10.1	51					29	843	−1.9	70
2,000	30	778	−15.3	78	28	800	5.3	61	31	797	2.0	59	31	789	−8.2	72	31	801	7.3	48	31	801	−0.2	66	29	791	−4.1	69
2,500	30	728	−16.7	73	28	753	4.0	55	31	748	−0.6	56	31	739	−10.0	70	31	754	4.1	48	31	753	0.0	61	29	742	−7.4	68
3,000	30	681	−18.8	70	28	708	1.7	50	31	703	−3.8	54	31	693	−12.2	68	31	709	1.5	48	31	707	−3.0	60	29	696	−10.7	69
4,000	30	595	−22.8	67	28	624	−3.9	43	31	619	−10.3	52	31	607	−16.9	59	31	625	−3.8	44	31	622	−9.4	60	29	610	−17.3	68
5,000	29	518	−28.1	63	28	550	−10.3	40	31	542	−17.1	51	31	530	−22.9	55	31	550	−10.6	41	31	546	−15.4	58	28	533	−23.9	69
6,000	29	450	−34.3	60	26	482	−16.4	37	30	474	−24.0	48	31	462	−29.5	53	31	482	−17.6	39	30	477	−22.5	57	28	464	−30.9	68
7,000	29	389	−40.9	----	23	422	−22.8	35	27	413	−31.5	46	31	401	−35.8	52	29	421	−24.9	38	29	416	−30.1	57	28	403	−38.4	66
8,000	28	335	−45.8	----	23	367	−29.3	34	25	357	−39.2	46	31	346	−41.8	----	27	366	−32.2	37	29	360	−38.1	56	26	347	−45.0	----
9,000	27	288	−49.0	----	20	318	−36.7	----	23	308	−46.7	----	31	298	−47.4	----	26	317	−39.0	----	28	310	−46.3	----	26	298	−50.8	----
10,000	27	248	−50.7	----	18	274	−44.1	----	22	264	−53.2	----	29	256	−52.1	----	25	274	−45.7	----	27	267	−53.6	----	26	256	−55.1	----
11,000	26	213	−51.0	----	16	236	−50.6	----	20	226	−56.7	----	29	220	−55.3	----	21	235	−52.0	----	27	228	−59.1	----	26	219	−57.8	----
12,000	21	182	−50.2	----	14	202	−55.6	----	20	193	−57.0	----	29	187	−55.7	----	18	201	−55.7	----	26	194	−57.0	----	25	187	−58.3	----
13,000	19	156	−49.6	----	14	172	−59.4	----	17	164	−56.2	----	28	160	−55.7	----	18	172	−58.5	----	26	165	−56.9	----	21	159	−57.0	----
14,000	13	134	−51.2	----	10	146	−62.6	----	15	140	−57.2	----	27	137	−56.9	----	17	146	−61.4	----	26	141	−58.1	----	21	136	−56.0	----
15,000	11	115	−52.8	----	6	124	−66.5	----	13	119	−59.1	----	22	116	−58.4	----	16	124	−64.0	----	25	120	−59.9	----	21	117	−56.5	----
16,000	7	98	−54.8	----	5	105	−68.5	----	12	102	−60.9	----	15	99	−59.3	----	14	106	−66.6	----	22	102	−61.8	----	18	100	−57.2	----
17,000									11	86	−61.4	----	7	85	−60.5	----	10	90	−67.0	----	16	86	−61.5	----	15	85	−58.6	----
18,000									6	74	−61.6	----					5	76	−66.8	----					8	72	−59.4	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during December 1942—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	999	0.6	86	31	976	−14.1	89	31	998	−6.0	92	29	1,019	11.0	89	26	1,015	−1.2	73	31	972	4.7	92	31	1,020	18.9	87
500	31	958	0.0	86	31	956	−14.3	90	31	957	−5.8	94	29	960	11.9	76	26	958	−2.9	68	31	961	4.4	92	31	962	19.2	80
1,000	31	900	−1.9	86	31	895	−14.0	90	31	898	−5.6	90	29	905	11.6	65	26	899	−4.1	66	31	904	4.2	84	31	908	16.2	78
1,500	31	846	−2.7	81	31	838	−13.4	87	31	843	−4.9	84	29	853	10.0	54	26	843	−4.7	66	31	850	3.1	75	31	856	14.2	68
2,000	31	794	−4.1	76	31	785	−13.3	83	31	791	−6.2	79	29	802	7.9	49	26	791	−5.5	67	31	798	0.5	72	31	806	13.0	53
2,500	31	745	−5.1	71	31	734	−14.9	81	31	742	−8.1	75	29	755	5.9	39	26	741	−6.3	68	31	750	−1.9	63	31	760	10.6	47
3,000	31	699	−7.3	69	31	687	−17.1	80	31	695	−10.4	73	29	710	3.8	35	26	695	−8.2	61	31	704	−4.4	60	31	715	8.0	45
4,000	31	614	−12.2	60	31	600	−22.3	75	30	610	−16.0	71	29	627	−1.3	30	26	611	−13.4	63	31	620	−10.2	58	31	633	2.5	44
5,000	31	538	−17.6	54	31	523	−28.4	71	30	534	−22.0	69	29	553	−7.3	31	25	536	−19.4	68	30	543	−16.6	57	31	559	−3.3	43
6,000	30	470	−24.2	54	31	454	−35.0	70	30	465	−28.4	68	29	485	−14.4	30	25	469	−25.2	70	30	474	−23.2	55	31	491	−9.3	42
7,000	30	409	−30.7	53	30	393	−41.4	----	30	404	−34.9	66	29	424	−21.6	29	25	407	−31.0	62	29	414	−30.5	53	31	432	−16.1	41
8,000	30	354	−37.1	51	30	338	−47.6	----	30	349	−41.3	----	28	370	−28.4	28	25	353	−37.1	62	29	358	−38.3	52	29	377	−23.1	40
9,000	30	306	−43.3	----	26	290	−52.1	----	29	301	−47.6	----	28	321	−35.8	28	24	304	−43.7	----	29	309	−45.8	----	29	328	−30.1	40
10,000	29	264	−48.8	----	24	248	−53.9	----	26	258	−52.9	----	26	277	−43.0	----	24	262	−49.1	----	29	265	−52.5	----	28	285	−37.5	40
11,000	29	226	−53.4	----	22	213	−52.2	----	25	221	−55.9	----	26	238	−49.7	----	24	225	−52.6	----	29	227	−56.9	----	25	246	−44.6	----
12,000	26	193	−56.0	----	19	182	−51.6	----	24	189	−55.9	----	25	204	−55.2	----	22	193	−55.0	----	29	194	−59.5	----	23	212	−51.3	----
13,000	25	165	−57.0	----	17	156	−51.4	----	24	161	−55.9	----	23	174	−58.8	----	20	165	−56.4	----	27	165	−58.3	----	19	181	−58.2	----
14,000	22	140	−58.5	----	10	134	−51.1	----	21	137	−57.1	----	21	148	−62.0	----	17	141	−57.6	----	27	140	−58.4	----	14	154	−64.0	----
15,000	19	120	−61.1	----	9	115	−51.7	----	19	117	−58.8	----	17	126	−66.0	----	14	120	−59.0	----	23	119	−59.6	----	12	130	−69.4	----
16,000	12	102	−62.4	----	----	----	----	----	12	100	−60.6	----	14	107	−69.5	----	13	102	−60.6	----	19	102	−60.4	----	7	110	−73.2	----
17,000	8	87	−63.5	----	----	----	----	----	6	84	−62.9	----	11	90	−71.4	----	5	87	−62.3	----	17	86	−61.1	----	5	92	−78.0	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	9	76	−72.0	----	----	----	----	----	10	73	−59.0	----	----	----	----	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	7	64	−69.2	----	----	----	----	----	7	62	−56.8	----	----	----	----	----

Altitude (meters) m. s. l.	Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	998	3.7	80	25	1,021	5.1	82	31	1,021	9.5	86	31	972	3.4	83	31	984	−4.7	86	25	1,016	13.8	85	31	977	9.5	64
500	31	950	2.8	79	25	961	4.9	69	31	961	9.3	75	31	958	4.1	81	31	959	−4.7	83	25	960	12.4	66	31	959	14.9	51
1,000	31	902	2.3	75	25	904	3.5	65	31	905	8.5	67	31	901	4.3	75	31	900	−3.9	73	25	905	11.6	51	31	904	13.5	42
1,500	30	848	2.0	70	25	850	2.5	62	31	852	7.3	58	31	848	5.5	62	31	845	−2.2	64	25	852	9.9	48	31	852	10.5	42
2,000	30	797	1.2	60	25	799	1.4	58	31	801	5.5	51	31	798	4.3	54	31	793	−3.2	60	25	802	8.4	38	31	801	7.2	42
2,500	30	749	−0.5	52	25	750	−0.9	56	31	754	3.2	45	31	750	2.1	49	31	744	−5.5	59	25	755	5.9	38	31	754	4.3	41
3,000	29	703	−2.8	49	25	705	−3.3	53	31	708	0.3	43	31	704	−0.7	48	31	698	−8.2	61	25	710	3.2	37	31	709	1.8	40
4,000	27	619	−8.0	45	23	620	−8.1	47	31	624	−5.5	38	31	621	−6.8	47	31	613	−13.4	59	23	627	−2.6	30	31	625	−3.8	37
5,000	25	544	−14.1	41	23	545	−14.0	43	31	549	−12.1	36	31	545	−12.9	46	31	537	−19.4	56	23	552	−8.8	32	31	550	−10.2	35
6,000	25	475	−20.6	40	20	477	−20.1	42	31	480	−19.2	36	31	477	−20.2	42	31	468	−26.4	54	23	484	−15.6	31	29	482	−17.4	35
7,000	25	415	−27.3	40	17	415	−26.6	39	31	420	−26.2	36	30	417	−27.3	41	31	407	−33.5	53	23	424	−22.4	34	28	421	−24.9	34
8,000	25	360	−33.6	37	----	----	----	----	31	364	−33.7	36	29	362	−34.6	41	31	352	−40.5	----	22	369	−29.3	41	28	367	−32.1	34
9,000	24	312	−40.0	34	----	----	----	----	30	315	−41.1	----	28	312	−42.0	----	31	303	−46.8	----	20	319	−36.2	41	28	317	−39.3	34
10,000	23	269	−46.4	----	----	----	----	----	29	272	−47.9	----	28	269	−48.8	----	31	260	−52.0	----	19	276	−42.6	----	27	274	−46.3	----
11,000	20	232	−51.7	----	----	----	----	----	29	233	−53.7	----	26	231	−54.4	----	31	223	−55.4	----	18	238	−49.4	----	27	235	−52.3	----
12,000	17	198	−56.0	----	----	----	----	----	26	199	−57.9	----	25	197	−57.3	----	31	191	−55.0	----	16	204	−55.5	----	27	201	−56.8	----
13,000	15	169	−58.1	----	----	----	----	----	23	170	−59.1	----	22	168	−58.1	----	31	163	−54.4	----	15	174	−59.4	----	27	171	−58.4	----
14,000	14	145	−59.8	----	----	----	----	----	21	144	−59.2	----	20	144	−59.8	----	31	139	−55.2	----	13	148	−63.2	----	27	146	−60.4	----
15,000	14	123	−62.6	----	----	----	----	----	19	123	−60.4	----	18	123	−61.9	----	31	119	−56.2	----	7	125	−67.6	----	25	124	−62.6	----
16,000	13	104	−64.7	----	----	----	----	----	19	104	−61.4	----	11	104	−63.5	----	29	102	−57.5	----	----	----	----	----	23	105	−65.5	----
17,000	11	89	−66.3	----	----	----	----	----	18	89	−62.2	----	----	----	----	----	26	87	−58.5	----	----	----	----	----	21	89	−67.0	----
18,000	8	75	−67.3	----	----	----	----	----	14	75	−62.3	----	----	----	----	----	21	74	−58.9	----	----	----	----	----	20	76	−66.9	----
19,000	----	----	----	----	----	----	----	----	11	64	−61.2	----	----	----	----	----	14	63	−58.7	----	----	----	----	----	12	64	−65.4	----
20,000	----	----	----	----	----	----	----	----	5	54	−60.1	----	----	----	----	----	5	53	−58.2	----	----	----	----	----	----	----	----	----

	Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif. (19 m.)				San Juan, P. R. (15 m.)				Sault Ste. Marie, Mich. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,012	−6.0	72	31	999	−0.5	83	31	992	−8.9	86	30	990	11.0	74	30	1,016	13.6	81	30	1,014	24.8	81	31	988	−8.6	80
500	30	952	−7.4	75	31	958	−1.0	82	31	957	−10.3	89	30	960	13.0	69	30	960	12.5	62	30	960	21.9	85	31	954	−9.6	82
1,000	30	892	−9.4	75	31	900	−1.5	77	31	897	−9.5	84	30	904	12.1	61	30	906	11.0	47	30	907	18.6	88	31	894	−10.5	84
1,500	30	836	−10.6	74	31	846	−1.3	71	31	842	−8.3	78	29	852	10.5	57	30	853	8.9	36	30	855	15.5	86	31	837	−11.3	80
2,000	30	784	−11.3	72	31	794	−2.0	62	31	789	−9.2	73	29	802	8.6	50	30	803	6.4	32	30	806	13.5	75	31	784	−13.2	76
2,500	30	734	−12.7	67	31	746	−3.7	56	31	739	−11.1	71	29	755	6.4	47	30	754	3.9	31	30	759	11.9	59	31	734	−14.6	72
3,000	30	688	−14.7	65	31	700	−6.1	52	31	692	−13.7	72	29	710	4.4	40	30	708	1.2	30	30	715	9.8	48	31	687	−16.6	69
4,000	29	602	−19.6	62	30	615	−11.3	49	29	606	−19.2	73	29	627	−1.4	37	30	625	−5.2	26	30	634	5.0	33	31	600	−21.4	63
5,000	29	525	−25.1	61	28	539	−17.6	45	29	529	−25.3	67	29	553	−7.6	36	30	549	−11.8	28	30	560	−0.3	31	30	523	−26.8	60
6,000	29	457	−31.5	60	28	471	−24.2	44	28	460	−31.9	63	29	485	−14.4	34	29	481	−18.6	30	28	494	−6.4	28	29	455	−33.2	57
7,000	29	396	−37.4	59	28	410	−31.2	43	27	399	−38.8	63	28	425	−21.6	33	29	420	−26.1	24	28	434	−13.2	27	29	394	−40.2	--
8,000	29	342	−43.3	----	27	355	−38.3	43	25	344	−44.9	----	28	369	−28.6	33	19	364	−33.6	----	26	380	−19.8	26	28	339	−45.9	----
9,000	29	294	−47.3	----	26	306	−44.8	----	24	296	−49.6	----	28	320	−35.6	32	16	315	−40.8	----	26	331	−26.8	25	26	292	−49.4	----
10,000	26	253	−50.2	----	26	263	−51.0	----	20	254	−52.4	----	28	277	−42.7	----	16	272	−47.5	----	26	288	−34.3	25	26	250	−51.5	----
11,000	24	218	−52.8	----	26	226	−54.9	----	13	218	−53.0	----	26	238	−49.0	----	14	233	−54.2	----	26	249	−41.6	----	22	215	−52.1	----
12,000	18	186	−53.9	----	26	193	−56.5	----	11	186	−52.7	----	22	204	−54.6	----	14	199	−60.1	----	24	215	−49.0	----	19	184	−51.3	----
13,000	15	160	−54.7	----	23	164	−56.6	----	11	160	−53.1	----	18	174	−57.9	----	11	169	−62.8	----	24	184	−56.3	----	17	157	−50.8	----
14,000	12	137	−56.0	----	21	140	−58.1	----	8	137	−54.2	----	14	149	−61.5	----	9	144	−65.1	----	24	156	−63.3	----	17	135	−51.6	----
15,000	10	117	−57.9	----	20	119	−60.5	----	----	----	----	----	10	127	−66.1	----	9	121	−67.1	----	21	132	−70.4	----	14	115	−53.2	----
16,000	5	100	−60.2	----	19	102	−62.0	----	----	----	----	----	8	107	−70.7	----	9	102	−69.0	----	21	112	−76.1	----	7	99	−54.2	----
17,000	----	----	----	----	17	86	−63.5	----	----	----	----	----	7	91	−74.4	----	6	86	−71.0	----	19	94	−79.9	----	----	----	----	----
18,000	----	----	----	----	9	73	−63.5	----	----	----	----	----	----	----	----	----	----	----	----	----	17	78	−71.4	----	----	----	----	----
19,000	----	----	----	----	5	62	−63.0	----	----	----	----	----	----	----	----	----	----	----	----	----	15	66	−68.3	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	56	−62.6	----	----	----	----	----
21,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	47	−57.2	----	----	----	----	----

[1] U. S. Navy.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during December 1942—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Spokane, Wash. (598 m.)				Seattle, Wash.[1] (22 m.)				Swan Island, West Indies (10 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	945	0.7	90	27	1,013	6.3	87	30	1,014	23.5	84	23	1,015	6.3	92	27	1,016	1.0	72
500					27	956	3.2	85	30	959	22.3	87	23	958	4.9	82	27	957	.3	68
1,000	31	899	−.5	88	27	899	−.5	82	30	906	19.0	87	23	901	2.6	73	27	899	−1.5	68
1,500	31	844	−2.0	82	27	844	−1.9	78	30	855	16.3	83	23	847	−0.3	77	27	844	−2.4	67
2,000	31	792	−4.0	74	27	792	−4.7	75	30	805	13.5	79	23	795	−3.0	66	27	793	−3.1	63
2,500	30	743	−7.0	72	27	743	−7.9	75	29	759	11.4	71	23	747	−5.5	57	27	744	−4.6	61
3,000	30	697	−10.0	72	27	696	−11.0	73	28	715	9.1	62	23	700	−8.7	59	27	698	−7.1	59
4,000	30	612	−16.0	66	27	610	−17.5	74	28	633	3.4	60	23	614	−14.0	55	26	613	−12.3	56
5,000	30	534	−22.5	64	27	534	−24.0	72	27	559	−2.2	62	22	538	−20.0	55	26	537	−17.9	49
6,000	29	466	−29.1	59	27	465	−30.4	77	27	492	−8.3	58	21	470	−26.4	67	25	469	−23.9	47
7,000	29	404	−35.7	57	26	403	−36.8	85	27	432	−14.8	53	20	408	−33.5	69	22	409	−29.8	47
8,000	29	349	−42.5	----	22	348	−43.3	----	26	378	−21.8	52	13	352	−39.6	----	19	354	−35.7	46
9,000	29	300	−48.4	----	21	299	−49.6	----	25	329	−28.9	51	13	304	−44.7	----	16	306	−41.7	----
10,000	28	257	−53.2	----	18	256	−54.7	----	24	286	−36.3	----	11	261	−50.3	----	15	264	−47.8	----
11,000	28	221	−55.6	----	18	219	−58.3	----	24	247	−43.8	----	10	224	−52.2	----	12	227	−51.7	----
12,000	26	188	−56.2	----	14	186	−59.9	----	24	212	−51.0	----	9	191	−53.7	----	11	194	−53.8	----
13,000	25	161	−54.8	----	10	158	−59.7	----	23	181	−58.4	----	8	164	−52.9	----	10	167	−55.1	----
14,000	22	138	−54.3	----	7	134	−61.0	----	21	154	−65.8	----					6	143	−56.5	----
15,000	22	118	−55.0	----	5	113	−61.3	----	21	130	−72.9	----					6	122	−57.3	----
16,000	20	101	−55.2	----					20	110	−79.3	----								
17,000	15	86	−55.5	----					20	92	−83.2	----								
18,000	8	73	−55.9	----					15	77	−85.0	----								
19,000									10	64	−81.6	----								
20,000									9	53	−73.4	----								

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during January 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (7 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	838	3.8	45	31	1,020	12.3	86	31	985	6.2	84	31	960	−19.0	85	31	919	−2.5	82	31	1,019	12.7	90	31	991	−5.9	[2] 80
500					31	962	12.9	71	31	961	7.2	81									31	961	13.0	82	31	956	−5.9	[2] 78
1,000					31	906	11.4	66	31	904	6.2	75	31	898	−15.2	87	31	904	−1.8	79	31	906	13.1	71	31	896	−7.0	[2] 69
1,500					31	854	10.5	54	31	851	6.1	63	31	841	−12.8	87	31	849	−4.2	75	31	853	12.3	63	31	841	−8.3	[2] 69
2,000	31	800	3.4	46	31	804	9.3	44	31	800	5.3	49	31	787	−11.2	84	31	797	−5.5	69	31	803	10.8	57	31	788	−9.2	[2] 63
2,500	31	752	0.6	45	31	757	7.2	39	31	753	3.0	46	31	738	−12.5	82	31	748	−5.6	67	31	757	8.6	54	31	739	−10.5	[2] 58
3,000	31	706	−2.6	48	31	712	4.7	39	31	707	1.3	45	31	691	−14.4	81	31	701	−8.1	65	31	712	5.8	52	31	692	−12.4	[2] 51
4,000	31	622	−8.3	51	29	629	−.5	36	29	624	−3.7	41	31	604	−20.3	78	29	617	−13.9	59	30	629	0.0	48	31	606	−17.8	[2] 46
5,000	31	546	−14.6	50	29	554	−6.7	34	28	549	−10.4	36	30	528	−26.4	77	28	540	−19.9	56	30	555	−6.3	47	28	531	−22.7	[2] 47
6,000	31	477	−21.2	48	28	487	−13.3	34	28	481	−17.0	36	30	459	−33.3	72	28	471	−26.4	53	29	487	−12.9	45	27	462	−28.9	----
7,000	31	416	−28.3	45	28	426	−19.9	34	28	421	−23.9	36	29	396	−40.3	----	27	409	−34.1	47	29	427	−19.9	44	26	401	−35.7	----
8,000	31	362	−35.7	39	28	372	−27.0	34	28	366	−31.1	37	29	342	−46.9	----	25	353	−42.0	----	28	372	−27.1	44	24	347	−42.1	----
9,000	31	312	−43.0	----	27	323	−34.5	30	27	317	−38.3	35	29	293	−52.5	----	25	304	−48.5	----	28	323	−34.4	49	21	299	−48.4	----
10,000	30	269	−49.7	----	27	279	−42.1	----	27	274	−45.1	----	26	250	−56.6	----	22	260	−54.7	----	28	280	−41.9	----	15	256	−51.8	----
11,000	28	230	−54.7	----	26	240	−48.8	----	26	235	−52.3	----	23	214	−56.6	----	20	222	−58.2	----	27	241	−49.1	----	11	218	−52.7	----
12,000	24	197	−57.2	----	25	206	−53.8	----	22	201	−56.5	----	21	182	−55.9	----	15	189	−59.2	----	26	206	−54.4	----	10	187	−52.8	----
13,000	23	168	−58.1	----	24	176	−57.4	----	16	172	−58.5	----	19	156	−52.8	----	11	161	−57.3	----	24	176	−59.2	----	8	160	−53.5	----
14,000	22	143	−60.2	----	19	150	−61.1	----	15	147	−61.2	----	15	134	−52.4	----	8	138	−58.5	----	23	150	−62.8	----	5	138	−57.4	----
15,000	21	122	−61.6	----	16	128	−64.8	----	11	124	−64.1	----	5	114	−56.2	----	6	117	−61.6	----	22	127	−66.2	----				
16,000	17	104	−63.0	----	11	109	−69.3	----	10	106	−66.3	----									20	108	−69.3	----				
17,000	14	88	−64.3	----	10	92	−72.2	----	9	90	−68.7	----									17	91	−72.5	----				
18,000	7	75	−65.1	----					5	76	−69.6	----									13	77	−75.1	----				
19,000																					9	65	−73.6	----				

Altitude (meters) m. s. l.	Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	990	−15.5	89	31	1,019	8.4	85	31	835	−1.3	59	31	991	−7.1	89	31	884	7.3	52	30	809	−4.7	64	29	886	−11.8	73
500	30	950	−14.5	87	31	960	9.7	75					31	956	−7.3	89												
1,000	30	890	−14.6	85	31	905	8.7	70					31	896	−7.1	86												
1,500	30	833	−13.5	82	31	852	7.8	61					31	841	−7.3	80	31	851	8.0	49					29	844	−9.5	75
2,000	30	780	−13.9	77	31	801	6.3	53	31	796	0.0	54	31	788	−8.1	73	31	801	5.9	47	30	800	−2.9	64	29	791	−10.7	74
2,500	30	730	−15.0	75	31	754	4.3	48	31	748	−2.7	51	31	739	−8.9	64	31	753	3.1	47	30	751	−2.8	63	29	741	−10.2	72
3,000	30	683	−16.8	73	31	708	1.9	44	31	702	−5.4	50	31	692	−11.1	59	31	708	0.4	47	30	705	−5.7	64	28	694	−12.9	73
4,000	30	597	−21.8	68	31	625	−2.9	42	31	616	−12.2	49	31	607	−16.3	54	31	624	−5.2	45	30	620	−11.0	57	28	608	−18.5	72
5,000	30	520	−27.9	65	31	551	−9.2	39	31	540	−18.7	50	31	531	−22.4	51	30	549	−12.0	43	30	544	−17.0	53	27	531	−25.4	69
6,000	30	452	−34.0	64	31	483	−16.0	39	30	472	−25.1	49	31	463	−28.6	49	26	480	−19.4	41	30	475	−23.5	52	27	462	−32.3	65
7,000	30	391	−40.4	----	30	423	−22.7	37	29	411	−32.0	45	31	401	−35.6	50	22	419	−26.6	39	29	413	−31.5	50	27	400	−39.3	55
8,000	29	337	−46.8	----	30	368	−29.6	37	29	355	−39.6	48	31	347	−42.0	----	19	364	−33.5	32	29	358	−39.6	43	26	344	−46.2	----
9,000	28	290	−51.7	----	30	319	−36.9	26	27	306	−46.5	----	30	298	−47.9	----	17	314	−41.4	----	29	308	−47.9	----	25	297	−51.9	----
10,000	27	247	−54.3	----	28	276	−44.5	----	26	263	−53.4	----	28	256	−52.4	----	17	271	−48.3	----	26	265	−54.6	----	23	255	−56.4	----
11,000	27	212	−54.1	----	26	237	−51.4	----	24	226	−57.4	----	27	219	−54.5	----	14	232	−54.7	----	24	226	−60.2	----	22	218	−59.2	----
12,000	24	182	−54.0	----	25	203	−56.2	----	20	192	−59.1	----	26	188	−54.5	----	12	198	−57.6	----	24	192	−62.8	----	21	186	−59.2	----
13,000	22	156	−54.0	----	21	173	−58.9	----	17	164	−59.2	----	23	160	−55.7	----	10	169	−59.8	----	23	163	−62.2	----	20	159	−58.3	----
14,000	17	133	−54.6	----	17	147	−62.3	----	16	139	−60.0	----	19	137	−57.5	----	8	144	−62.1	----	21	139	−62.8	----	19	136	−58.4	----
15,000	15	115	−55.6	----	11	125	−65.1	----	14	118	−60.6	----	10	117	−59.4	----	7	123	−65.1	----	21	118	−64.0	----	15	116	−59.6	----
16,000	12	98	−58.3	----	10	106	−67.6	----	13	101	−61.5	----	7	100	−53.6	----	5	104	−68.4	----	19	100	−65.8	----	12	99	−61.4	----
17,000	8	83	−58.9	----	7	90	−70.0	----	10	86	−61.0	----									13	85	−65.7	----	8	86	−61.5	----
18,000									9	73	−62.0	----									5	72	−64.3	----	5	74	−62.6	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during January 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	998	2.1	81	31	977	−18.8	90	31	996	−6.1	87	27	1,020	10.2	[2]87	27	1,013	−1.0	[2]76	31	971	1.7	89	31	1,020	18.6	88
500	30	958	1.6	81	31	956	−18.6	91	31	956	−6.3	89	27	961	10.7	[2]72	27	956	−1.7	[2]69	31	960	1.5	87	31	962	18.6	81
1,000	30	901	−.2	82	31	894	−18.0	91	31	897	−6.3	83	27	905	10.8	60	27	898	−2.5	[2]68	31	902	2.7	70	31	908	15.4	81
1,500	30	846	−1.8	81	31	836	−16.3	89	31	841	−5.8	79	27	853	10.2	[2]47	27	843	−3.2	[2]69	31	848	.9	64	31	856	13.5	72
2,000	30	794	−3.1	77	31	783	−15.7	86	31	789	−6.3	72	27	802	9.0	[2]41	27	791	−4.5	[2]65	29	798	−1.4	60	31	806	12.2	52
2,500	30	745	−4.7	72	31	732	−16.7	83	31	740	−8.2	69	27	755	6.7	[2]40	27	742	−6.4	[2]61	29	749	−3.2	55	31	760	9.4	47
3,000	30	699	−6.4	64	31	685	−18.6	81	31	694	−10.3	68	27	710	4.3	[2]42	27	696	−8.5	[2]60	29	703	−5.7	49	31	715	6.8	45
4,000	30	615	−11.2	56	30	598	−23.9	78	31	609	−15.7	62	27	627	−1.1	[2]45	27	611	−13.0	[2]59	29	618	−11.3	46	31	632	1.6	38
5,000	30	539	−16.7	52	30	520	−29.6	72	31	532	−22.0	60	27	553	−7.6	----	26	536	−18.9	[2]60	28	541	−17.6	45	30	553	−4.2	32
6,000	30	471	−23.0	49	30	452	−36.4	67	30	464	−28.3	55	26	485	−14.3	----	26	469	−25.0	----	27	473	−24.2	43	30	490	−10.8	31
7,000	30	411	−29.0	46	28	390	−42.5	----	30	403	−34.9	49	25	424	−21.2	----	26	408	−32.1	----	26	412	−31.3	39	30	430	−18.0	30
8,000	30	356	−36.1	45	26	335	−48.5	----	28	348	−41.3	----	23	370	−28.6	----	26	352	−38.8	----	25	357	−38.9	26	30	376	−25.3	29
9,000	30	307	−43.4	----	24	288	−52.6	----	28	300	−47.4	----	21	321	−36.2	----	26	304	−45.5	----	25	307	−46.4	----	30	326	−32.4	28
10,000	28	265	−49.5	----	23	247	−55.1	----	28	257	−51.8	----	19	278	−43.3	----	23	262	−51.0	----	25	264	−53.1	----	30	283	−39.3	----
11,000	25	227	−54.4	----	22	211	−55.3	----	28	221	−54.4	----	17	239	−50.1	----	20	224	−54.1	----	24	226	−58.4	----	30	244	−45.9	----
12,000	23	193	−56.8	----	22	180	−54.9	----	26	189	−56.0	----	17	204	−55.4	----	19	192	−56.0	----	23	193	−61.0	----	28	209	−52.4	----
13,000	17	166	−57.3	----	20	154	−54.1	----	24	161	−55.2	----	16	175	−59.2	----	15	164	−56.9	----	22	164	−59.3	----	25	179	−58.0	----
14,000	14	141	−59.3	----	18	132	−56.0	----	17	138	−56.6	----	14	149	−63.1	----	12	140	−57.4	----	21	140	−59.5	----	23	152	−62.7	----
15,000	10	120	−61.4	----	10	114	−56.5	----	11	118	−57.9	----	13	126	−66.5	----	9	120	−59.5	----	20	119	−60.5	----	16	129	−67.0	----
16,000	7	103	−64.4	----	----	----	----	----	6	101	−60.6	----	12	107	−69.0	----	----	----	----	----	17	102	−61.9	----	15	110	−72.4	----
17,000	5	88	−64.6	----	----	----	----	----	----	----	----	----	9	91	−72.1	----	----	----	----	----	15	87	−61.8	----	7	92	−76.4	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	8	76	−72.1	----	----	----	----	----	7	75	−61.0	----	6	78	−76.3	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	6	65	−69.5	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	998	4.2	[2]75	30	1,020	5.2	81	31	1,017	9.3	79	30	973	0.6	64	31	984	−7.1	[2]77	27	1,017	11.8	[2]85	31	977	9.4	64
500	30	959	4.3	[2]71	30	960	5.7	66	31	958	10.3	65	30	959	2.1	63	31	959	−7.1	[2]70	27	962	10.9	[2]71	31	959	13.1	54
1,000	30	902	3.2	[2]73	30	903	4.5	59	31	902	8.6	62	30	902	3.6	56	31	900	−4.7	[2]59	27	906	9.9	[2]60	31	903	11.7	45
1,500	30	848	2.4	[2]68	30	849	3.6	54	31	850	7.0	56	30	849	4.3	51	31	844	−4.3	[2]53	27	853	8.9	[2]51	31	850	8.6	44
2,000	30	797	1.6	[2]54	30	798	1.9	48	31	799	4.7	52	30	798	3.0	45	31	792	−5.1	[2]48	27	803	6.9	[2]48	31	800	5.4	43
2,500	30	749	−0.1	[2]48	30	750	−0.2	45	31	752	2.4	46	30	750	0.8	44	31	743	−6.5	[2]41	27	755	5.1	[2]38	31	752	2.7	44
3,000	30	703	−2.2	[2]40	29	704	−2.9	42	31	706	.1	43	30	704	−1.4	44	31	697	−8.7	[2]41	27	710	2.7	[2]36	31	707	−0.2	43
4,000	30	620	−7.2	[2]36	29	620	−7.6	38	29	623	−6.5	38	30	620	−6.8	41	31	612	−14.7	[2]47	24	626	−2.9	[2]40	31	623	−6.1	41
5,000	28	544	−13.0	[2]33	29	544	−13.8	39	28	547	−13.5	37	30	545	−12.8	38	31	536	−20.8	[2]49	23	551	−9.2	[2]34	31	548	−12.6	40
6,000	28	476	−19.4	----	28	477	−20.1	38	28	478	−20.6	36	30	477	−19.7	36	31	467	−28.0	----	23	484	−15.8	[2]30	31	479	−19.7	39
7,000	27	416	−26.5	----	26	416	−26.3	40	28	418	−27.9	34	30	416	−27.2	35	29	406	−34.2	----	22	423	−23.0	[2]26	30	419	−27.2	38
8,000	25	361	−33.5	----	----	----	----	----	28	362	−35.3	33	30	362	−34.5	35	29	351	−40.8	----	22	368	−30.6	----	29	363	−34.7	41
9,000	22	312	−40.6	----	----	----	----	----	28	313	−42.8	----	30	313	−41.7	----	29	302	−47.4	----	21	319	−37.9	----	29	313	−42.2	----
10,000	19	269	−46.6	----	----	----	----	----	27	270	−49.5	----	29	270	−48.2	----	29	259	−52.8	----	20	275	−45.3	----	28	270	−48.5	----
11,000	15	231	−51.5	----	----	----	----	----	26	231	−55.1	----	26	231	−53.7	----	29	222	−55.3	----	19	236	−52.3	----	28	232	−53.9	----
12,000	14	197	−55.2	----	----	----	----	----	20	198	−59.1	----	25	198	−57.6	----	29	190	−55.9	----	19	202	−55.8	----	28	198	−56.9	----
13,000	13	168	−56.0	----	----	----	----	----	17	169	−58.4	----	22	168	−59.7	----	28	162	−55.5	----	16	172	−59.1	----	28	169	−58.6	----
14,000	10	143	−58.8	----	----	----	----	----	16	145	−58.2	----	21	143	−61.1	----	27	138	−56.7	----	12	146	−62.2	----	25	144	−59.5	----
15,000	9	122	−60.3	----	----	----	----	----	15	124	−59.9	----	17	122	−63.1	----	23	118	−58.7	----	7	124	−66.9	----	23	123	−62.0	----
16,000	9	103	−61.1	----	----	----	----	----	13	105	−61.3	----	8	104	−65.3	----	21	101	−59.9	----	----	----	----	----	20	104	−63.7	----
17,000	6	88	−60.6	----	----	----	----	----	10	90	−61.7	----	5	88	−65.7	----	18	86	−60.1	----	----	----	----	----	20	88	−65.0	----
18,000	5	75	−63.1	----	----	----	----	----	9	76	−62.2	----	----	----	----	----	9	73	−61.1	----	----	----	----	----	18	75	−65.0	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	12	64	−63.9	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8	54	−62.9	----

Altitude (meters) m. s. l.	Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				S. Ste. Marie, Mich. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,014	−8.5	65	31	999	−1.7	74	31	992	−13.2	84	30	992	8.5	66	30	1,105	13.4	[2]75	31	1,016	23.3	85	31	990	−10.7	86
500	30	954	−7.7	65	31	958	−1.7	71	31	957	−13.6	86	30	962	10.6	62	30	959	11.3	[2]56	31	961	20.7	88	31	955	−11.5	88
1,000	30	894	−8.9	63	31	900	−2.3	68	31	896	−11.8	84	30	906	10.0	57	30	903	8.9	[2]47	31	907	17.3	86	31	894	−12.6	84
1,500	30	838	−8.8	57	31	845	−1.8	63	31	840	−10.5	82	30	853	9.6	53	30	850	5.8	[2]43	31	856	14.8	83	31	838	−13.6	82
2,000	30	786	−9.9	53	31	794	−2.8	57	31	787	−10.6	78	30	802	7.7	47	30	799	3.8	[2]39	31	806	11.6	76	31	784	−14.2	76
2,500	30	736	−11.7	50	31	745	−4.4	52	31	737	−12.2	75	30	755	5.6	44	30	751	1.0	[2]36	31	759	9.5	66	31	734	−15.0	72
3,000	30	690	−13.9	51	31	699	−6.4	48	31	690	−14.4	72	30	710	3.2	45	30	705	−1.9	[2]31	30	715	7.7	51	31	687	−16.9	69
4,000	30	604	−18.4	53	30	614	−11.7	44	31	604	−19.6	70	30	627	−2.2	45	30	620	−8.0	[2]33	29	632	3.7	33	31	601	−21.4	68
5,000	30	527	−24.1	54	30	538	−17.6	42	29	528	−25.1	69	30	552	−8.7	42	30	544	−14.8	[2]41	28	559	−2.2	27	29	524	−28.0	69
6,000	29	459	−30.9	56	30	470	−23.8	41	29	459	−31.1	69	30	484	−15.6	42	30	476	−22.0	----	27	492	−8.8	25	26	455	−34.3	60
7,000	29	398	−36.8	60	29	410	−30.2	39	26	397	−39.3	66	30	424	−22.4	39	30	416	−29.4	----	25	432	−15.3	23	25	394	−41.3	----
8,000	26	344	−42.8	----	28	355	−37.1	32	24	343	−45.6	----	29	369	−29.5	37	17	361	−37.4	----	23	378	−21.4	23	24	338	−47.3	----
9,000	26	296	−48.3	----	28	307	−44.2	----	21	295	−50.8	----	28	319	−37.2	37	16	312	−44.4	----	21	329	−28.2	22	23	290	−52.2	----
10,000	26	254	−51.8	----	28	264	−50.3	----	17	252	−54.9	----	28	276	−44.1	----	16	268	−51.4	----	20	286	−35.0	24	22	249	−54.7	----
11,000	25	218	−54.2	----	28	226	−54.2	----	14	216	−54.9	----	27	238	−50.8	----	15	230	−56.2	----	18	248	−41.8	----	16	213	−54.8	----
12,000	22	186	−54.6	----	28	193	−56.1	----	10	186	−54.5	----	26	203	−55.7	----	14	197	−58.5	----	15	214	−48.0	----	14	182	−54.3	----
13,000	17	159	−54.6	----	27	165	−57.3	----	10	159	−55.1	----	26	174	−60.0	----	12	166	−59.7	----	14	183	−54.0	----	13	156	−54.2	----
14,000	16	136	−55.5	----	24	140	−58.4	----	8	136	−55.2	----	23	148	−62.6	----	7	141	−59.9	----	12	157	−59.9	----	10	134	−55.4	----
15,000	12	118	−56.8	----	23	126	−60.7	----	6	116	−54.7	----	21	126	−65.4	----	5	119	−61.4	----	11	133	−66.4	----	----	----	----	----
16,000	10	100	−58.4	----	20	102	−62.5	----	----	----	----	----	17	107	−67.8	----	----	----	----	----	11	112	−72.6	----	----	----	----	----
17,000	6	86	−60.7	----	15	87	−63.5	----	----	----	----	----	13	90	−69.6	----	----	----	----	----	11	94	−78.0	----	----	----	----	----
18,000	----	----	----	----	9	74	−64.4	----	----	----	----	----	10	76	−71.0	----	----	----	----	----	11	79	−81.4	----	----	----	----	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10	66	−80.6	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	55	−75.9	----	----	----	----	----
21,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8	47	−69.7	----	----	----	----	----

[1] U. S. Navy

[2] Humidity data obtained by electric hydrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during January 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	26	1,018	2.4	[2]81	31	949	−5.0	81	29	1,016	24.9	81	22	1,017	2.7	[2]82	27	1,016	1.5	[2]77
500	26	960	0.7	[2]74					29	960	21.6	85	22	959	2.5	[2]71	27	958	1.5	[2]72
1,000	26	902	−0.4	[2]66	31	901	−6.6	82	29	906	18.3	85	22	902	1.0	[2]65	27	900	0.9	[2]68
1,500	26	847	−2.5	[2]70	31	845	−7.1	76	29	855	15.6	78	22	846	−1.4	[2]61	27	846	−0.7	[2]68
2,000	25	795	−5.5	[2]70	31	793	−7.1	65	29	805	12.9	72	22	794	−3.9	[2]53	27	794	−1.2	[2]63
2,500	25	746	−8.5	[2]67	31	743	−9.1	61	29	759	10.6	64	22	745	−6.1	[2]41	27	746	−2.6	[2]54
3,000	25	699	−11.8	[2]64	30	697	−11.3	59	29	715	8.1	58	22	699	−8.8	[2]40	27	700	−4.7	[2]48
4,000	25	613	−17.7	[2]67	30	610	−17.4	55	28	633	3.0	47	22	613	−14.6	[2]43	27	616	−10.0	[2]50
5,000	25	535	−23.4	[2]69	30	533	−23.3	53	28	559	−2.1	39	22	538	−21.2	[2]50	27	540	−15.6	[2]52
6,000	25	466	−30.1	----	30	464	−30.1	53	28	492	−8.4	35	22	468	−27.4	[2]58	27	472	−22.0	----
7,000	25	404	−37.0	----	27	402	−37.4	40	27	432	−15.7	33	20	407	−34.4	----	27	412	−28.8	----
8,000	25	348	−44.4	----	26	347	−45.0	----	26	377	−23.0	33	18	353	−40.3	----	25	357	−36.3	----
9,000	25	299	−50.8	----	25	298	−51.5	----	26	328	−30.3	34	18	304	−47.3	----	23	308	−43.0	----
10,000	22	258	−55.5	----	24	256	−56.2	----	23	285	−38.1	----	17	260	−54.0	----	20	266	−49.8	----
11,000	21	220	−58.5	----	21	218	−59.6	----	22	246	−45.0	----	14	224	−58.3	----	18	228	−55.3	----
12,000	19	187	−60.0	----	17	186	−60.2	----	19	211	−51.6	----	12	190	−62.1	----	14	195	−57.5	----
13,000	15	159	−59.2	----	17	159	−58.8	----	17	181	−57.2	----	9	162	−62.6	----	12	167	−58.8	----
14,000	12	136	−58.6	----	15	136	−58.8	----	17	154	−63.4	----	5	140	−60.0	----	10	143	−60.2	----
15,000	10	117	−58.3	----	11	117	−59.4	----	17	130	−69.9	----					8	122	−62.7	----
16,000	8	100	−59.5	----	9	100	−59.4	----	17	110	−76.3	----					6	104	−64.0	----
17,000									16	92	−81.0	----								
18,000									12	77	−80.6	----								
19,000									10	65	−77.3	----								
20,000									9	55	−72.9	----								
21,000									8	46	−68.0	----								

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (7 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	840	7.1	[2]31	28	1,021	12.3	73	28	985	6.6	62	28	957	9.4	88	25	921	1.4	80	28	1,019	16.4	84	25	987	−3.7	[2]78
500					28	963	11.7	60	28	962	8.1	58									28	962	16.1	73	25	953	−5.1	[2]78
1,000					28	907	9.4	55	28	905	5.7	56	28	898	−5.8	80	25	906	2.4	76	28	907	14.4	60	25	894	−7.6	[2]75
1,500					28	854	7.4	51	27	852	3.6	57	28	842	−5.3	73	25	852	1.5	69	28	855	12.9	49	25	838	−9.4	[2]65
2,000	28	802	6.7	[2]31	28	803	5.7	45	27	800	1.5	54	28	790	−6.3	65	25	801	−0.5	64	28	806	11.0	47	25	785	−11.2	[2]61
2,500	28	754	3.2	[2]32	28	755	4.0	43	27	752	−0.1	52	28	741	−8.5	61	25	752	−2.6	61	28	758	8.9	41	25	735	−13.5	[2]58
3,000	28	709	−0.3	[2]35	28	710	2.0	37	27	706	−2.5	51	28	694	−11.1	58	25	705	−5.4	60	28	714	6.4	38	25	688	−15.3	[2]52
4,000	28	625	−6.9	[2]38	28	626	−3.4	32	25	622	−8.0	46	28	609	−16.9	56	25	620	−10.9	53	28	631	0.3	35	22	602	−20.3	[2]51
5,000	27	549	−13.5	[2]36	27	552	−9.3	28	25	546	−14.5	44	28	532	−22.4	55	25	544	−17.7	48	28	556	−6.2	33	22	525	−25.6	[2]46
6,000	26	481	−19.6	[2]32	26	484	−15.9	28	25	478	−20.7	42	27	463	−29.5	54	25	475	−24.9	47	25	489	−13.0	34	22	457	−32.2	----
7,000	26	420	−26.4	[2]34	25	423	−23.0	29	24	416	−27.4	43	26	402	−36.7	47	25	413	−32.0	47	25	428	−20.1	33	21	396	−37.9	----
8,000	26	365	−33.8	[2]38	23	368	−30.2	27	23	362	−34.2	44	25	347	−43.5	----	24	357	−39.4	41	25	373	−27.4	33	17	339	−44.3	----
9,000	26	315	−41.2	----	23	319	−38.0	----	21	312	−41.6	----	25	299	−49.5	----	22	307	−46.7	----	25	324	−34.6	35	13	291	−46.7	----
10,000	24	272	−48.0	----	22	275	−44.8	----	19	270	−47.3	----	24	256	−52.8	----	21	264	−51.7	----	25	280	−42.1	----	12	250	−47.3	----
11,000	23	233	−53.4	----	20	237	−49.7	----	18	232	−52.4	----	24	219	−53.3	----	19	226	−55.1	----	23	241	−49.4	----	8	212	−44.8	----
12,000	21	200	−56.5	----	17	203	−53.0	----	16	199	−53.9	----	23	188	−51.4	----	15	194	−54.5	----	22	207	−55.5	----	7	182	−44.1	----
13,000	19	170	−56.8	----	17	174	−55.4	----	14	170	−55.5	----	21	161	−50.9	----	13	166	−53.5	----	22	176	−58.4	----	7	157	−44.3	----
14,000	17	145	−58.1	----	15	148	−58.9	----	11	145	−58.3	----	18	138	−51.5	----	10	141	−54.5	----	22	150	−62.2	----	5	137	−46.0	----
15,000	14	124	−60.2	----	12	126	−62.4	----	10	124	−61.4	----	13	118	−54.1	----	8	121	−56.9	----	22	128	−66.5	----	5	117	−48.7	----
16,000	8	105	−60.8	----	9	107	−66.3	----	7	106	−64.5	----	8	101	−54.2	----					21	108	−70.4	----	5	101	−50.9	----
17,000	7	90	−60.9	----	6	91	−68.8	----	6	90	−67.9	----	5	87	−55.2	----					16	91	−72.9	----				
18,000	7	76	−62.3	----																	14	77	−74.0	----				
19,000																					8	65	−74.6	----				

Altitude (meters) m. s. l.	Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1193 m.)				Ely, Nev. (1908 m.)				Great Falls, Mont. (1128 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	985	−9.8	87	27	1,019	7.8	75	28	838	2.2	41	28	988	−4.2	82	28	884	11.3	31	28	811	−2.3	80	28	888	−1.4	66
500	28	947	−9.5	87	27	961	9.8	58					28	954	−4.2	76												
1,000	28	887	−11.5	86	27	905	6.8	53					28	895	−5.8	72												
1,500	28	831	−12.6	82	27	851	4.5	50					28	839	−7.2	67	28	852	12.4	31					28	847	−0.2	64
2,000	28	778	−13.8	78	27	800	1.9	49	28	799	3.7	40	28	787	−9.3	63	28	802	9.4	31	28	802	−0.3	78	28	796	−2.2	61
2,500	28	728	−15.6	75	27	752	−0.4	48	28	751	0.7	38	28	737	−11.1	59	28	755	6.1	31	28	753	−0.2	69	28	747	−4.8	59
3,000	28	682	−17.8	74	27	706	−2.8	48	28	705	−2.7	38	28	691	−13.2	55	28	711	3.1	32	28	708	−3.3	64	28	701	−7.9	59
4,000	28	595	−23.2	73	27	622	−7.5	43	28	621	−9.7	36	28	605	−18.2	55	28	627	−3.4	32	27	623	−9.3	58	28	615	−13.4	57
5,000	28	519	−28.6	66	27	546	−13.3	42	28	544	−16.8	36	26	527	−24.2	55	28	552	−9.9	32	27	546	−15.9	53	27	539	−19.7	55
6,000	28	451	−34.5	59	27	478	−20.0	42	28	476	−24.2	34	26	459	−30.6	55	27	484	−17.2	32	27	477	−23.4	52	26	471	−26.1	54
7,000	27	390	−40.4	----	26	418	−26.7	41	26	414	−31.3	34	24	397	−37.1	49	27	423	−24.4	32	27	416	−30.9	46	26	408	−33.2	47
8,000	26	336	−45.5	----	25	362	−33.5	41	25	357	−39.1	----	24	343	−43.4	----	26	368	−31.7	31	27	360	−38.7	38	26	353	−41.0	----
9,000	26	289	−49.6	----	25	314	−40.5	----	25	308	−45.9	----	24	295	−47.3	----	25	318	−39.0	----	27	310	−46.0	----	25	304	−47.0	----
10,000	25	248	−51.2	----	23	271	−46.7	----	22	265	−50.7	----	24	254	−49.5	----	24	275	−46.2	----	27	267	−51.4	----	25	261	−51.9	----
11,000	25	212	−51.8	----	22	233	−51.7	----	22	227	−53.7	----	21	218	−50.3	----	24	236	−52.7	----	26	229	−55.2	----	25	224	−54.5	----
12,000	23	182	−51.4	----	18	199	−54.6	----	19	194	−53.3	----	20	187	−49.3	----	21	202	−57.3	----	26	196	−56.4	----	21	192	−53.8	----
13,000	22	156	−51.4	----	14	170	−57.3	----	19	166	−54.0	----	19	160	−50.4	----	18	172	−58.9	----	25	167	−57.0	----	18	165	−52.7	----
14,000	22	134	−52.5	----	12	145	−59.4	----	18	142	−54.8	----	17	138	−51.5	----	14	147	−60.8	----	22	143	−59.2	----	14	141	−53.2	----
15,000	19	115	−53.7	----	8	123	−62.6	----	17	121	−57.6	----	13	118	−52.9	----	13	125	−63.8	----	18	122	−61.6	----	11	120	−54.2	----
16,000	14	99	−54.9	----	5	104	−66.3	----	16	103	−60.0	----	9	102	−54.3	----	9	106	−66.5	----	17	104	−64.1	----	7	103	−55.4	----
17,000	9	85	−56.8	----					15	88	−60.7	----					7	90	−67.8	----	16	88	−64.2	----				
18,000									13	75	−60.6	----					6	76	−68.6	----	10	75	−63.2	----				
19,000									10	64	−59.1	----																

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	998	1.3	77	28	972	−12.3	83	28	994	−3.5	82	28	1,021	12.3	[2]83	26	1,011	0.0	[2]65	28	971	8.6	66	28	1,021	15.8	79
500	28	958	1.6	73	28	953	−11.7	85	28	955	−3.0	78	28	963	12.1	[2]63	26	954	−0.5	[2]52	28	961	9.0	64	28	964	16.6	73
1,000	28	900	−1.2	70	28	892	−11.5	80	28	896	−4.1	72	28	907	9.9	[2]58	26	896	−3.1	[2]54	28	904	7.8	57	28	908	13.3	75
1,500	28	846	−3.2	71	28	836	−11.8	78	27	841	−5.5	70	28	854	8.7	[2]52	26	841	−5.4	[2]57	28	851	5.1	58	28	856	11.1	67
2,000	27	793	−6.1	67	28	783	−13.1	78	27	789	−7.2	69	28	804	7.1	[2]51	26	789	−6.6	[2]56	28	800	2.0	60	28	806	9.9	53
2,500	27	744	−8.0	63	28	734	−14.5	76	26	740	−9.8	66	28	756	4.7	[2]51	26	740	−8.8	[2]58	28	751	−1.0	57	28	759	8.1	44
3,000	27	697	−9.8	58	28	686	−16.5	73	26	693	−12.2	65	28	710	2.5	[2]40	26	693	−11.1	[2]58	27	705	−3.8	52	28	714	6.2	35
4,000	27	612	−15.0	55	28	600	−21.7	71	25	606	−17.5	59	28	627	−3.0	[2]36	26	608	−15.8	[2]47	27	621	−10.3	52	27	631	1.2	33
5,000	26	535	−21.3	53	27	523	−27.4	68	25	530	−23.4	56	26	552	−9.6	[2]34	26	531	−21.3	[2]50	27	544	−17.1	49	27	557	−4.7	30
6,000	26	467	−27.2	48	26	454	−33.7	65	24	462	−30.0	51	26	484	−16.4	----	26	464	−27.7	----	27	476	−23.7	46	27	490	−11.7	28
7,000	26	405	−33.7	44	26	393	−39.8	57	24	400	−36.5	47	26	423	−23.6	----	26	403	−34.5	----	27	414	−30.5	45	27	429	−18.9	27
8,000	25	352	−39.5	40	26	338	−45.6	----	22	346	−42.4	----	25	368	−31.3	----	26	348	−41.0	----	25	358	−37.3	42	25	374	−26.4	27
9,000	23	303	−45.3	----	25	291	−49.2	----	20	299	−46.8	----	25	319	−38.6	----	26	296	−45.7	----	24	309	−43.9	----	24	325	−33.9	25
10,000	23	260	−50.0	----	24	249	−50.8	----	19	257	−48.7	----	22	275	−45.3	----	24	258	−49.3	----	23	266	−49.9	----	23	282	−40.6	----
11,000	23	223	−52.6	----	22	214	−50.5	----	17	221	−50.7	----	17	236	−50.5	----	22	223	−53.6	----	23	229	−54.0	----	23	242	−47.3	----
12,000	23	191	−53.4	----	20	184	−49.7	----	15	190	−51.9	----	15	202	−53.8	----	20	191	−51.7	----	21	196	−54.0	----	23	208	−52.7	----
13,000	22	164	−53.2	----	18	158	−49.5	----	13	162	−52.8	----	13	173	−57.9	----	18	163	−52.2	----	18	168	−52.9	----	18	178	−57.3	----
14,000	20	140	−55.1	----	18	135	−49.4	----	9	140	−55.0	----	11	148	−61.6	----	18	140	−54.2	----	18	143	−53.9	----	15	151	−61.8	----
15,000	17	120	−57.5	----	15	116	−49.8	----	8	120	−57.5	----	9	126	−64.7	----	13	121	−55.5	----	14	123	−56.7	----	13	129	−65.9	----
16,000	13	102	−60.3	----	10	100	−52.2	----	5	103	−57.6	----	8	107	−67.9	----	9	103	−56.1	----	11	106	−59.8	----	8	110	−69.0	----
17,000	11	87	−61.5	----	5	86	−56.4	----	----	----	----	----	6	91	−70.8	----	5	88	−53.7	----	6	91	−62.0	----	6	92	−71.2	----
18,000	6	75	−61.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	78	−61.8	----	----	----	----	----

Altitude (meters) m. s. l.	Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	27	998	5.4	[2]60	23	1,017	7.3	68	28	1,019	11.9	75	28	973	6.4	[2]56	27	982	−0.9	[2]72	20	1,020	12.5	[2]72	28	978	13.3	50
500	27	960	4.9	[2]54	23	958	7.4	53	28	961	10.8	65	28	960	7.5	[2]52	27	958	0.7	[2]60	20	964	10.9	[2]57	28	960	16.9	45
1,000	27	903	2.2	[2]58	23	901	4.8	52	28	905	8.9	60	28	904	7.2	[2]45	27	900	−0.6	[2]51	20	907	7.9	[2]49	28	905	14.7	41
1,500	27	848	0.4	[2]53	23	847	1.9	55	28	852	6.5	55	28	850	6.2	[2]40	27	846	−1.4	[2]49	20	853	6.3	[2]50	28	852	11.0	40
2,000	27	796	−1.3	[2]50	23	796	−0.6	54	28	800	3.8	54	28	800	4.0	[2]36	27	794	−3.3	[2]42	19	803	5.1	[2]40	28	802	7.4	41
2,500	27	748	−3.2	[2]46	23	747	−2.7	51	28	753	1.1	49	27	751	1.8	[2]35	27	745	−5.6	[2]42	19	755	3.2	[2]36	28	755	4.2	42
3,000	27	702	−5.5	[2]46	23	701	−5.3	47	28	707	−1.9	46	27	706	−0.9	[2]35	27	699	−8.0	[2]41	19	710	0.8	[2]29	28	709	1.0	41
4,000	27	617	−11.0	[2]46	23	617	−11.2	45	28	622	−8.1	42	27	622	−6.7	[2]32	27	614	−13.2	[2]46	19	625	−5.0	[2]33	28	626	−4.6	38
5,000	26	541	−17.0	----	22	541	−17.6	48	27	546	−15.1	44	26	546	−13.2	[2]33	27	538	−19.1	[2]47	19	550	−10.8	[2]37	27	551	−10.7	37
6,000	24	473	−23.8	----	21	472	−24.0	49	27	478	−21.9	43	24	478	−20.6	[2]39	27	469	−26.1	----	18	483	−17.1	42	26	483	−18.0	35
7,000	24	411	−30.7	----	18	412	−29.8	50	26	416	−29.2	42	23	417	−27.9	[2]47	26	408	−33.6	----	18	422	−23.4	47	26	422	−25.1	34
8,000	24	356	−37.6	----	----	----	----	----	26	361	−36.2	41	20	362	−34.8	----	26	353	−40.9	----	15	366	−31.7	49	26	367	−32.4	32
9,000	20	307	−43.5	----	----	----	----	----	25	311	−42.9	----	19	313	−41.6	----	26	304	−46.8	----	15	316	−38.1	----	26	317	−39.7	27
10,000	15	265	−48.4	----	----	----	----	----	25	268	−48.3	----	13	271	−47.3	----	26	261	−50.8	----	13	273	−45.1	----	26	274	−46.7	----
11,000	14	228	−52.0	----	----	----	----	----	22	231	−52.8	----	8	232	−51.6	----	26	224	−52.2	----	13	235	−50.3	----	26	235	−53.0	----
12,000	11	195	−53.2	----	----	----	----	----	22	197	−54.9	----	6	199	−50.6	----	26	192	−51.0	----	12	201	−54.8	----	25	201	−56.7	----
13,000	7	169	−54.0	----	----	----	----	----	21	169	−54.4	----	----	----	----	----	25	164	−51.0	----	12	172	−57.4	----	24	172	−57.9	----
14,000	5	144	−55.2	----	----	----	----	----	21	144	−55.3	----	----	----	----	----	25	141	−53.1	----	9	146	−60.6	----	22	147	−59.8	----
15,000	----	----	----	----	----	----	----	----	17	124	−57.1	----	----	----	----	----	22	121	−55.1	----	7	124	−64.6	----	21	125	−61.7	----
16,000	----	----	----	----	----	----	----	----	15	106	−59.5	----	----	----	----	----	20	103	−56.7	----	5	104	−68.2	----	21	106	−64.2	----
17,000	----	----	----	----	----	----	----	----	12	90	−61.0	----	----	----	----	----	15	88	−57.9	----	----	----	----	----	21	90	−65.0	----
18,000	----	----	----	----	----	----	----	----	9	77	−61.7	----	----	----	----	----	7	76	−59.2	----	----	----	----	----	18	77	−64.9	----
19,000	----	----	----	----	----	----	----	----	5	66	−63.0	----	----	----	----	----	----	----	----	----	----	----	----	----	15	65	−64.5	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11	56	−62.9	----

Altitude (meters) m. s. l.	Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Sault Ste. Marie, Mich (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,009	−5.4	71	28	997	2.6	[2]63	27	988	−8.3	[2]75	28	992	13.3	[2]60	27	1,016	15.0	78	28	1,015	23.2	82	28	984	−8.5	86
500	28	950	−4.6	71	28	957	2.7	[2]54	27	954	−8.3	[2]71	28	963	14.0	[2]56	27	960	13.4	61	28	960	19.8	84	28	950	−8.9	88
1,000	28	891	−6.9	68	28	900	0.6	[2]52	27	895	−8.0	[2]63	28	908	12.2	[2]54	27	904	11.1	50	28	906	16.3	84	28	890	−10.4	85
1,500	28	836	−8.4	66	28	845	−0.9	[2]46	26	839	−8.3	[2]59	28	855	10.1	[2]51	27	851	8.8	41	28	855	13.3	80	28	834	−11.9	80
2,000	28	783	−10.3	62	28	793	−2.7	[2]44	26	786	−9.5	[2]56	28	804	8.8	[2]44	27	801	6.4	42	28	805	10.6	75	28	780	−13.2	75
2,500	28	734	−12.4	59	28	745	−5.1	[2]48	26	737	−11.5	[2]51	28	757	5.9	[2]39	27	753	4.0	35	28	758	8.6	63	28	731	−15.1	72
3,000	27	687	−14.5	56	28	699	−7.7	[2]48	26	690	−13.5	[2]46	28	712	3.5	[2]31	27	707	0.6	36	28	714	6.8	49	28	684	−17.2	70
4,000	25	600	−20.1	57	28	614	−13.0	[2]43	26	604	−18.8	[2]48	28	629	−2.0	[2]29	27	624	−5.6	40	26	631	2.5	33	28	598	−21.8	67
5,000	24	524	−25.5	56	28	537	−19.5	[2]47	26	528	−24.4	----	28	554	−8.4	[2]30	27	548	−11.8	40	26	557	−2.3	28	28	521	−27.5	64
6,000	23	456	−31.9	55	27	469	−26.0	----	25	459	−30.8	----	28	486	−14.9	[2]23	27	480	−19.3	----	24	490	−8.7	27	28	453	−34.1	61
7,000	23	395	−38.8	52	27	408	−32.6	----	25	398	−37.1	----	26	425	−22.0	----	27	420	−26.7	----	24	430	−15.4	28	26	393	−39.9	55
8,000	22	340	−44.8	----	26	353	−39.6	----	22	344	−43.3	----	25	370	−29.1	----	11	364	−33.6	----	21	377	−22.5	28	26	338	−46.0	----
9,000	21	293	−49.0	----	23	305	−45.7	----	21	296	−48.4	----	21	321	−36.9	----	11	315	−40.5	----	19	328	−30.0	28	26	290	−50.1	----
10,000	20	252	−51.6	----	23	262	−50.4	----	20	254	−51.0	----	18	278	−44.2	----	9	271	−47.9	----	17	285	−36.9	----	25	250	−51.6	----
11,000	16	217	−53.4	----	22	225	−52.9	----	19	218	−51.2	----	14	238	−51.3	----	9	233	−53.9	----	15	247	−43.3	----	25	214	−51.1	----
12,000	13	186	−52.9	----	22	192	−52.9	----	16	187	−50.3	----	13	204	−56.2	----	9	199	−57.3	----	11	212	−48.6	----	24	184	−49.9	----
13,000	12	159	−52.3	----	21	165	−52.8	----	15	161	−50.3	----	13	174	−57.5	----	8	170	−58.6	----	9	182	−55.3	----	18	158	−50.2	----
14,000	9	136	−54.8	----	18	141	−55.2	----	12	138	−51.6	----	12	148	−61.2	----	----	----	----	----	6	156	−62.0	----	17	136	−51.6	----
15,000	6	117	−56.8	----	14	121	−57.3	----	11	119	−53.7	----	9	126	−64.9	----	----	----	----	----	6	132	−67.3	----	15	116	−53.8	----
16,000	----	----	----	----	9	104	−58.0	----	5	101	−53.8	----	6	107	−67.8	----	----	----	----	----	5	111	−72.4	----	10	100	−55.1	----
17,000	----	----	----	----	5	89	−60.4	----	----	----	----	----	5	90	−69.7	----	----	----	----	----	5	94	−76.8	----	5	86	−55.8	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	79	−80.8	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during February 1943—Continued

STATIONS AND ELEVATION IN METER ABOVE SEA LEVELS—Continued

Altitude (meters) m. s. l.	Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)				Tacubaya, Mexico (2,310 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	18	1,019	6.6	[2]75	26	950	−0.1	86	28	1,017	24.5	76	19	775	14.6	40	20	1,018	8.2	[2]75	28	1,014	2.9	[2]60
500	18	961	6.7	[2]56					28	961	21.1	82					20	961	8.2	[2]62	28	956	1.7	[2]52
1,000	18	905	5.2	[2]53	26	904	1.2	75	28	907	17.5	85					20	904	6.0	[2]57	28	898	−0.9	[2]56
1,500	18	851	2.7	[2]51	26	849	0.3	68	28	856	14.5	83					20	850	3.0	[2]52	28	844	−3.4	[2]61
2,000	18	799	−0.4	[2]55	26	797	−2.1	62	28	806	11.6	75					20	799	−0.2	[2]48	28	792	−5.5	[2]58
2,500	18	750	−3.0	[2]53	26	748	−4.6	56	27	759	9.8	66	19	758	13.3	41	20	750	−3.1	[2]42	28	743	−7.2	[2]49
3,000	18	704	−5.8	[2]51	26	702	−7.4	53	27	714	7.6	61	19	714	10.1	45	20	704	−5.9	[2]42	28	696	−9.3	[2]43
4,000	17	619	−11.9	[2]57	26	617	−12.6	51	26	633	3.7	45	19	632	3.3	49	20	619	−12.3	[2]43	28	611	−14.7	[2]37
5,000	16	543	−18.4	[2]58	26	540	−19.0	48	26	559	−0.8	33	18	558	−3.6	50	20	542	−18.9	[2]44	27	534	−21.3	[2]38
6,000	16	474	−25.4	----	26	472	−26.3	47	26	492	−6.9	28	18	491	−9.7	44	20	474	−25.6	[2]55	27	466	−27.6	----
7,000	14	411	−32.2	----	24	410	−32.8	40	26	433	−14.1	27	17	431	−16.5	36	18	412	−31.8	[2]52	25	405	−33.2	----
8,000	13	356	−39.0	----	23	355	−39.2	31	25	379	−21.4	26	17	376	−24.1	35	17	356	−38.8	----	25	350	−39.3	----
9,000	12	306	−45.8	----	22	307	−45.3	----	25	329	−29.1	27	17	327	−31.7	36	17	308	−45.2	----	23	303	−44.6	----
10,000	11	262	−52.1	----	21	264	−51.3	----	25	286	−36.9	30	17	284	−39.2	----	16	264	−50.0	----	19	261	−49.4	----
11,000	9	227	−54.7	----	19	227	−56.0	----	25	247	−44.6	----	17	245	−46.8	----	15	227	−53.6	----	18	224	−51.9	----
12,000	8	195	−52.8	----	19	194	−54.4	----	25	212	−52.0	----	17	210	−53.7	----	9	197	−55.1	----	17	192	−53.5	----
13,000	7	167	−54.7	----	14	166	−53.2	----	23	181	−59.1	----	17	179	−58.6	----	9	168	−54.1	----	16	164	−52.5	----
14,000	5	143	−57.4	----	12	142	−54.0	----	23	154	−65.8	----	16	153	−63.7	----	6	144	−56.8	----	10	141	−55.7	----
15,000	----	----	----	----	11	121	−56.0	----	23	130	−72.0	----	16	129	−68.9	----	----	----	----	----	7	120	−56.2	----
16,000	----	----	----	----	9	103	−56.9	----	22	110	−77.0	----	14	110	−73.7	----	----	----	----	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	18	92	−79.5	----	13	92	−78.1	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	16	77	−80.4	----	11	77	−79.2	----	----	----	----	----	----	----	----	----
19,000	----	----	----	----	----	----	----	----	15	65	−75.6	----	5	66	−78.9	----	----	----	----	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	8	55	−71.7	----	----	----	----	----	----	----	----	----	----	----	----	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosonde during March 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (7 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	836	9.6	[2]35	31	1,020	15.0	[2]82	31	986	9.4	73	31	957	−7.4	82	31	915	4.7	[2]63	31	1,016	17.3	[2]84	30	993	−0.6	[2]72
500	----	----	----	----	31	962	14.2	[2]67	31	963	9.4	71	----	----	----	----	----	----	----	----	31	959	15.8	[2]76	30	959	−0.6	[2]64
1,000	----	----	----	----	31	907	12.1	[2]61	31	906	7.3	68	31	898	−7.0	76	31	901	5.2	[2]58	31	904	14.4	[2]59	30	901	−2.8	[2]60
1,500	----	----	----	----	31	854	9.8	[2]56	31	853	5.0	70	31	842	−8.4	72	31	847	2.8	[2]53	31	852	13.2	[2]49	30	845	−5.4	[2]57
2,000	30	798	8.9	[2]34	31	804	7.6	[2]49	31	802	3.6	63	31	788	−10.3	70	31	796	−0.5	[2]57	31	802	11.7	[2]41	30	793	−7.4	[2]60
2,500	30	751	5.1	[2]37	31	756	5.6	[2]39	31	754	2.0	56	31	739	−12.4	70	31	747	−3.9	[2]63	31	756	10.1	[2]33	30	743	−9.2	[2]61
3,000	30	706	1.0	[2]39	30	711	3.6	[2]36	31	708	−0.2	52	31	692	−14.1	69	31	701	−7.1	[2]65	31	712	7.7	[2]28	30	696	−11.2	[2]59
4,000	30	622	−7.0	[2]47	29	628	−1.9	[2]35	30	625	−5.7	48	31	606	−19.9	68	31	616	−13.3	[2]65	30	630	1.3	[2]26	29	610	−16.5	[2]54
5,000	30	547	−14.1	[2]54	29	553	−8.1	[2]39	28	549	−11.9	46	30	529	−25.5	65	31	540	−19.8	[2]62	29	555	−6.2	[2]24	28	535	−21.7	[2]58
6,000	30	478	−20.8	[2]48	28	486	−14.7	[2]41	26	481	−19.0	45	30	460	−32.0	63	31	471	−26.3	[2]61	29	488	−13.2	[2]24	28	466	−28.5	----
7,000	30	417	−28.0	[2]47	28	425	−22.2	[2]42	25	420	−25.7	44	30	398	−39.2	55	29	409	−33.0	[2]62	28	427	−20.6	[2]25	24	404	−34.7	----
8,000	29	362	−35.3	----	28	370	−29.9	----	23	365	−32.5	48	30	343	−45.6	----	29	354	−39.9	----	27	372	−28.5	[2]32	23	350	−41.4	----
9,000	27	313	−42.5	----	26	320	−37.7	----	22	316	−39.9	49	29	295	−50.9	----	28	305	−46.7	----	27	323	−36.3	[2]35	17	301	−47.5	----
10,000	26	269	−49.4	----	25	277	−45.1	----	21	273	−47.2	----	28	253	−54.1	----	22	262	−53.0	----	27	279	−43.6	----	11	259	−53.7	----
11,000	22	232	−53.9	----	23	238	−51.1	----	18	234	−52.7	----	28	216	−55.1	----	20	225	−56.6	----	27	240	−50.0	----	9	221	−56.7	----
12,000	22	198	−56.9	----	17	203	−55.1	----	14	200	−56.3	----	26	184	−54.4	----	16	191	−58.2	----	25	206	−54.3	----	8	188	−54.9	----
13,000	19	169	−58.3	----	14	174	−57.1	----	13	170	−57.4	----	24	157	−54.6	----	15	163	−57.2	----	22	176	−57.9	----	8	160	−54.3	----
14,000	15	144	−58.7	----	12	148	−60.4	----	12	145	−60.5	----	21	135	−55.1	----	12	140	−56.8	----	21	150	−61.7	----	6	137	−54.2	----
15,000	11	124	−61.5	----	7	126	−64.2	----	11	123	−62.5	----	11	115	−57.2	----	8	119	−57.2	----	20	127	−66.4	----	5	117	−54.5	----
16,000	10	105	−63.2	----	6	107	−68.2	----	6	105	−65.7	----	7	99	−58.2	----	5	101	−58.2	----	19	108	−70.6	----	5	100	−54.1	----
17,000	7	89	−64.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16	91	−73.9	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10	77	−74.8	----	----	----	----	----

Altitude (meters) m. s. l.	Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	995	−8.2	77	31	1,020	11.0	89	31	836	0.7	[2]50	30	993	−0.6	[2]77	31	880	14.8	29	30	808	2.1	70	31	885	−3.7	66
500	31	956	−8.0	74	31	963	11.7	77	----	----	----	----	30	958	−0.7	[2]65	----	----	----	----	----	----	----	----	----	----	----	----
1,000	31	897	−10.5	72	31	907	9.4	74	----	----	----	----	30	900	−3.4	[2]63	----	----	----	----	----	----	----	----	----	----	----	----
1,500	31	840	−13.3	71	31	854	7.0	70	----	----	----	----	30	844	−5.3	[2]61	31	848	14.9	29	----	----	----	----	31	844	−4.1	66
2,000	31	786	−14.6	69	31	803	5.0	62	31	796	1.3	[2]42	30	792	−6.8	[2]50	31	799	11.4	29	30	799	2.3	68	31	792	−6.7	66
2,500	31	736	−15.7	67	31	755	2.7	55	31	748	−1.7	[2]43	30	743	−9.2	[2]49	31	752	7.6	28	30	751	0.4	64	31	742	−9.2	67
3,000	31	689	−16.8	65	31	710	0.4	49	31	702	−4.9	[2]46	30	696	−11.3	[2]54	31	708	3.5	29	30	705	−3.4	64	31	696	−12.3	67
4,000	28	602	−20.1	62	31	626	−5.2	46	30	618	−11.7	[2]49	30	610	−16.0	[2]55	31	625	−3.9	30	30	620	−10.2	64	31	669	−18.0	65
5,000	27	526	−25.4	58	30	550	−10.9	42	30	541	−18.5	[2]52	30	534	−22.0	[2]53	27	550	−11.3	33	30	544	−16.2	61	31	632	−24.2	63
6,000	27	457	−31.2	54	27	482	−17.7	40	30	473	−25.4	[2]49	27	465	−28.8	[2]54	27	482	−17.9	32	30	476	−22.8	59	28	464	−30.6	55
7,000	26	396	−37.2	49	27	421	−24.9	38	30	411	−32.5	[2]52	26	403	−35.5	----	27	421	−24.9	31	27	413	−30.4	57	27	402	−37.0	51
8,000	24	343	−43.0	----	27	366	−32.2	35	29	356	−39.6	----	25	348	−42.1	----	27	366	−32.4	29	27	358	−37.9	47	27	347	−43.6	----
9,000	19	294	−48.6	----	25	317	−39.5	33	29	306	−46.9	----	23	300	−48.2	----	27	316	−40.4	----	24	310	−45.0	----	25	299	−49.7	----
10,000	17	252	−52.2	----	24	274	−46.9	----	27	263	−53.2	----	18	260	−53.6	----	25	272	−47.8	----	24	266	−52.0	----	24	256	−54.2	----
11,000	15	217	−55.3	----	21	235	−53.7	----	25	224	−57.4	----	17	222	−56.3	----	24	234	−54.5	----	21	228	−56.7	----	24	219	−56.4	----
12,000	14	186	−56.1	----	19	201	−57.0	----	25	191	−57.8	----	15	190	−56.2	----	23	200	−57.4	----	21	195	−58.2	----	23	187	−56.3	----
13,000	13	158	−56.0	----	18	171	−58.6	----	24	163	−57.1	----	10	162	−55.2	----	22	171	−59.3	----	21	166	−59.1	----	19	160	−56.1	----
14,000	11	136	−56.7	----	11	146	−60.4	----	22	139	−58.6	----	8	138	−54.9	----	20	146	−60.4	----	21	142	−59.4	----	16	137	−55.4	----
15,000	7	116	−58.5	----	11	124	−63.3	----	19	119	−60.0	----	7	119	−57.5	----	16	124	−63.7	----	21	120	−60.2	----	12	117	−55.1	----
16,000	----	----	----	----	5	105	−66.4	----	16	102	−60.2	----	----	----	----	----	13	106	−67.5	----	21	103	−60.9	----	10	100	−55.4	----
17,000	----	----	----	----	----	----	----	----	12	86	−60.4	----	----	----	----	----	7	90	−68.5	----	19	88	−61.0	----	6	86	−55.5	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	74	−60.9	----	6	73	−55.6	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during March 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,002	3.1	78	31	975	−9.7	[2]75	31	999	−1.0	[2]77	31	1,018	13.5	[2]84	27	1,016	2.9	[2]65	30	1,006	20.9	76	31	968	10.1	64
500	30	962	4.1	72	31	956	−9.2	[2]72	31	959	−1.1	[2]66	31	960	12.2	[2]69	27	956	2.8	[2]53	30	958	21.1	54	31	958	10.3	63
1,000	20	905	1.8	67	31	896	−11.3	[2]71	31	900	−3.3	[2]63	31	905	10.7	[2]63	27	902	0.7	[2]47	30	904	21.0	34	31	902	7.7	62
1,500	30	850	−0.6	66	31	838	−13.5	[2]70	31	845	−5.2	[2]63	31	852	9.3	[2]57	27	847	−1.7	[2]42	29	854	18.6	29	31	848	3.9	66
2,000	30	798	−2.4	66	31	785	−13.8	[2]63	31	792	−6.9	[2]58	31	802	7.4	[2]51	27	795	−3.4	[2]44	28	805	15.5	26	31	797	0.2	73
2,500	30	749	−4.3	65	31	735	−15.7	[2]61	31	743	−8.8	[2]57	31	754	5.6	[2]41	27	746	−5.3	[2]42	28	758	12.4	25	31	749	−2.5	73
3,000	30	703	−6.6	65	31	687	−18.0	[2]62	31	696	−10.6	[2]58	31	709	3.2	[2]37	27	700	−7.8	[2]39	28	714	9.4	24	31	703	−5.3	69
4,000	30	618	−10.7	59	31	600	−23.3	[2]62	31	611	−16.1	[2]55	31	626	−2.3	[2]28	27	614	−12.7	[2]44	26	632	3.1	23	31	618	−10.6	60
5,000	30	542	−16.8	57	30	523	−28.4	[2]54	31	534	−21.6	[2]54	30	551	−9.1	[2]31	27	538	−18.7	[2]41	26	558	−3.8	23	31	542	−17.1	57
6,000	30	474	−23.4	57	29	455	−35.2	----	31	466	−28.0	[2]55	30	484	−16.2	[2]31	27	470	−25.3	[2]41	26	491	−11.3	23	31	474	−23.5	54
7,000	29	412	−30.1	57	29	393	−41.7	----	27	405	−34.8	----	29	423	−23.7	----	26	410	−31.4	[2]47	25	430	−18.9	23	30	413	−30.4	53
8,000	29	357	−37.1	59	27	338	−47.7	----	22	350	−41.8	----	29	368	−31.6	----	23	354	−37.6	----	24	375	−26.5	23	30	357	−38.3	54
9,000	29	308	−44.0	----	23	290	−51.7	----	19	301	−48.8	----	27	318	−39.6	----	21	305	−45.0	----	24	326	−34.1	24	29	308	−45.8	----
10,000	29	265	−50.3	----	21	248	−54.0	----	10	257	−52.8	----	25	275	−46.4	----	20	263	−51.1	----	23	283	−41.6	----	27	264	−52.8	----
11,000	27	227	−55.5	----	18	211	−54.0	----	7	221	−55.8	----	23	236	−52.5	----	20	226	−56.1	----	23	243	−48.5	----	27	226	−57.4	----
12,000	25	194	−56.6	----	18	181	−53.0	----	5	187	−52.9	----	19	202	−57.8	----	17	193	−57.1	----	22	208	−53.7	----	25	193	−58.0	----
13,000	22	166	−57.4	----	16	155	−52.9	----	----	----	----	----	18	173	−59.0	----	13	165	−57.6	----	21	178	−58.0	----	23	165	−57.0	----
14,000	21	141	−57.5	----	13	133	−53.4	----	----	----	----	----	17	147	−61.1	----	9	141	−60.8	----	21	152	−63.0	----	21	141	−57.6	----
15,000	17	120	−59.1	----	9	113	−53.7	----	----	----	----	----	13	125	−64.3	----	6	120	−60.2	----	21	128	−68.4	----	20	120	−58.8	----
16,000	16	103	−60.8	----	7	97	−53.4	----	----	----	----	----	9	106	−67.2	----	6	102	−61.8	----	20	109	−72.9	----	17	102	−58.7	----
17,000	10	88	−62.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19	92	−75.0	----	11	87	−59.2	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	77	−74.1	----	5	74	−58.9	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8	65	−73.3	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	55	−69.4	----	----	----	----	----

Altitude (meters) m. s. l.	Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[3] (24 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,020	20.1	79	31	1,000	7.2	[2]68	24	1,023	8.1	[2]75	31	1,017	13.0	79	31	972	6.1	[2]65	30	983	0.9	[2]67	----	----	----	----
500	31	963	18.6	79	31	962	5.9	[2]60	24	963	7.0	[2]65	31	958	10.1	74	31	959	6.3	[2]62	30	959	0.7	[2]62	----	----	----	----
1,000	31	908	15.4	79	31	905	3.3	[2]54	24	906	5.1	[2]62	31	902	8.0	61	31	903	4.7	[2]57	30	901	−1.5	[2]61	----	----	----	----
1,500	31	856	12.7	72	31	850	1.7	[2]49	24	852	2.9	[2]57	31	849	6.1	52	31	849	4.4	[2]50	30	846	−3.3	[2]55	----	----	----	----
2,000	31	806	10.5	61	31	799	0.4	[2]48	24	801	1.3	[2]53	31	798	3.7	50	31	798	3.3	[2]47	30	794	−4.4	[2]44	----	----	----	----
2,500	31	759	8.9	50	31	750	−1.1	[2]41	24	752	−1.0	[2]50	31	750	1.4	45	31	750	1.4	[2]42	30	745	−6.2	[2]43	----	----	----	----
3,000	31	714	6.4	46	31	705	−3.2	[2]37	24	706	−3.2	[2]48	31	705	−1.5	43	31	705	−1.1	[2]40	30	698	−8.8	[2]43	----	----	----	----
4,000	31	632	0.8	39	30	620	−9.3	[2]44	23	622	−8.7	[2]41	31	621	−7.8	41	31	621	−7.3	[2]41	29	613	−14.6	[2]38	----	----	----	----
5,000	31	557	−5.4	35	30	544	−15.4	[2]45	23	546	−15.5	[2]41	31	545	−14.3	43	31	545	−13.9	[2]44	29	537	−20.7	[2]42	----	----	----	----
6,000	29	490	−11.9	31	28	476	−22.5	[2]39	23	477	−22.3	----	30	477	−21.4	47	31	477	−21.1	[2]47	29	468	−27.3	[2]46	----	----	----	----
7,000	29	429	−19.2	30	28	414	−29.5	[2]44	22	417	−28.6	----	29	416	−28.9	53	31	416	−28.3	[2]53	29	407	−34.4	----	----	----	----	----
8,000	27	374	−26.7	32	27	359	−37.0	----	----	----	----	----	29	360	−36.7	62	28	361	−35.6	----	29	352	−41.7	----	----	----	----	----
9,000	27	325	−34.0	29	26	310	−44.3	----	----	----	----	----	24	311	−44.2	----	25	313	−43.1	----	29	303	−48.0	----	----	----	----	----
10,000	26	281	−41.1	----	24	267	−51.6	----	----	----	----	----	22	268	−50.3	----	22	270	−50.4	----	29	259	−52.6	----	----	----	----	----
11,000	25	242	−47.0	----	18	229	−57.2	----	----	----	----	----	19	229	−55.9	----	13	231	−57.0	----	29	222	−54.6	----	----	----	----	----
12,000	24	208	−51.7	----	13	197	−59.7	----	----	----	----	----	17	196	−58.8	----	12	197	−60.0	----	29	190	−55.1	----	----	----	----	----
13,000	21	178	−57.0	----	9	167	−61.5	----	----	----	----	----	14	166	−59.3	----	9	168	−61.0	----	28	163	−55.8	----	----	----	----	----
14,000	18	152	−62.8	----	5	143	−59.9	----	----	----	----	----	13	142	−59.3	----	8	144	−60.5	----	28	139	−56.1	----	----	----	----	----
15,000	13	128	−69.1	----	----	----	----	----	----	----	----	----	11	121	−60.8	----	7	122	−62.3	----	27	118	−57.1	----	----	----	----	----
16,000	8	109	−72.0	----	----	----	----	----	----	----	----	----	9	103	−62.1	----	----	----	----	----	25	101	−58.0	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	8	88	−62.0	----	----	----	----	----	19	87	−58.6	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	7	75	−61.3	----	----	----	----	----	11	74	−59.2	----	----	----	----	----

Altitude (meters) m. s. l.	Phoenix, Ariz. (339 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	973	16.7	45	31	1,018	−2.4	62	31	1,000	3.8	61	31	991	−4.5	[2]77	31	989	13.7	[2]63	30	1,014	15.0	[2]81	30	1,016	23.4	80
500	31	956	19.6	39	31	958	−3.1	62	31	960	2.7	54	31	957	−5.4	[2]72	31	960	13.2	[2]61	30	958	12.3	[2]77	30	960	19.7	79
1,000	31	901	16.7	36	31	899	−5.5	58	31	903	0.9	54	31	898	−7.3	[2]68	31	904	11.7	[2]54	30	903	10.7	[2]59	30	906	16.2	76
1,500	31	850	12.8	37	31	843	−7.0	59	31	848	−1.1	52	31	842	−8.6	[2]58	31	852	10.7	[2]49	30	850	9.1	[2]51	30	855	13.0	72
2,000	31	800	8.7	39	31	791	−8.2	58	31	796	−3.1	51	31	789	−10.3	[2]54	31	802	10.0	[2]38	30	800	6.8	[2]45	30	805	10.4	62
2,500	31	752	4.9	42	31	741	−9.6	56	31	747	−4.5	51	31	739	−12.3	[2]54	31	755	7.8	[2]31	30	752	4.4	[2]35	30	758	8.5	46
3,000	31	707	1.5	43	31	694	−11.7	57	31	701	−6.5	46	31	692	−14.2	[2]55	31	710	4.8	[2]31	30	707	2.0	[2]25	29	713	6.6	38
4,000	31	624	−4.5	41	30	609	−16.3	55	30	616	−11.9	50	31	606	−19.3	[2]51	31	627	−2.0	[2]32	30	624	−3.6	[2]24	27	631	1.8	30
5,000	31	549	−10.8	38	29	533	−21.3	55	30	540	−18.0	51	31	529	−24.9	[2]52	31	552	−8.6	[2]34	30	549	−10.0	[2]33	20	556	−4.0	29
6,000	31	481	−17.9	36	28	464	−28.4	53	29	471	−25.1	49	31	460	−30.9	[2]55	30	485	−15.6	----	30	481	−16.9	----	18	489	−9.3	23
7,000	31	420	−25.3	36	28	403	−35.5	57	29	410	−32.4	----	30	399	−38.0	----	29	424	−22.8	----	30	421	−23.9	----	16	438	−16.1	25
8,000	31	365	−32.9	35	27	348	−42.1	----	29	355	−39.7	----	30	344	−45.0	----	22	369	−30.8	----	12	367	−30.7	----	14	376	−22.8	27
9,000	31	316	−40.5	----	25	299	−48.3	----	28	306	−46.5	----	28	296	−50.1	----	20	319	−38.7	----	12	317	−38.4	----	11	327	−29.4	31
10,000	30	273	−47.4	----	24	256	−53.0	----	27	262	−52.4	----	27	254	−53.1	----	14	276	−46.2	----	12	274	−45.6	----	7	285	−36.2	----
11,000	30	234	−53.4	----	23	220	−55.7	----	26	225	−56.2	----	27	218	−54.0	----	12	237	−53.0	----	8	236	−52.3	----	5	246	−42.5	----
12,000	30	200	−57.9	----	20	188	−55.2	----	22	192	−56.8	----	21	186	−53.5	----	10	202	−56.4	----	8	202	−57.6	----	----	----	----	----
13,000	30	170	−59.4	----	14	160	−52.8	----	19	164	−57.9	----	19	159	−53.0	----	9	173	−58.1	----	8	172	−59.5	----	----	----	----	----
14,000	28	145	−59.5	----	8	137	−55.4	----	17	140	−58.8	----	13	136	−54.4	----	6	147	−60.0	----	5	147	−60.8	----	----	----	----	----
15,000	25	124	−61.3	----	6	117	−55.9	----	11	119	−60.3	----	9	116	−53.9	----	----	----	----	----	----	----	----	----	----	----	----	----
16,000	22	106	−63.7	----	----	----	----	----	9	102	−61.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17,000	20	90	−64.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	16	76	−64.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19,000	10	65	−64.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20,000	5	54	−64.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during March 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)				Tacubaya, Mexico (2,306 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point Oreg.[1] (21 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	991	−8.6	87	29	1,013	7.7	[2]71	31	945	2.0	70	18	1,015	25.1	82	28	773	17.4	37	17	1,010	6.2	82	24	1,015	7.0	78
500	31	956	−8.3	86	29	956	5.0	[2]64					18	960	21.5	88					17	954	3.2	83	24	957	4.2	72
1,000	31	896	−9.9	84	29	899	1.5	[2]67	31	899	1.0	65	18	906	18.4	85					17	897	−0.1	85	24	900	0.6	73
1,500	31	840	−11.7	82	29	844	−1.9	[2]72	31	845	−2.3	65	18	855	15.6	79					17	842	−3.0	82	24	845	−2.0	68
2,000	31	786	−13.6	79	28	792	−5.2	[2]69	31	793	−5.6	64	18	806	12.7	71					17	790	−5.6	75	24	793	−4.3	52
2,500	31	736	−15.1	78	28	743	−8.1	[2]64	30	744	−8.6	62	18	759	10.2	65	28	756	16.4	38	17	741	−8.2	71	24	744	−6.6	43
3,000	31	688	−17.0	75	28	696	−11.1	[2]58	30	697	−11.7	63	18	714	8.1	59	28	712	12.6	39	17	695	−11.0	69	24	698	−8.9	41
4,000	31	602	−21.7	74	28	611	−16.5	[2]63	28	611	−17.8	58	18	632	3.7	43	28	631	4.5	45	15	609	−16.7	62	24	612	−14.7	40
5,000	31	525	−27.4	69	27	534	−22.9	[2]69	28	534	−23.3	55	18	559	−1.6	30	28	558	−3.6	56	13	532	−23.2	57	23	536	−21.2	47
6,000	29	457	−32.8	68	27	465	−29.7	[2]68	27	465	−29.8	52	17	492	−8.2	26	28	490	−10.7	58	13	464	−29.4	54	23	468	−28.0	56
7,000	28	396	−39.0	65	22	404	−36.3	----	26	403	−36.6	52	17	432	−14.3	25	27	430	−16.9	49	11	403	−35.1	54	21	406	−34.5	63
8,000	28	341	−44.6	----	19	348	−43.2	----	25	348	−43.2	----	16	378	−21.4	24	27	376	−24.1	46	10	349	−41.3	----	18	351	−41.5	----
9,000	28	293	−49.1	----	17	298	−49.6	----	25	299	−49.6	----	16	328	−28.5	24	27	326	−31.4	43	10	300	−47.8	----	16	304	−47.9	----
10,000	28	251	−52.6	----	15	256	−54.0	----	24	257	−54.3	----	16	286	−36.1	----	27	284	−38.8	----	10	258	−53.7	----	16	260	−53.1	----
11,000	26	216	−54.1	----	13	220	−54.9	----	20	221	−56.6	----	16	247	−43.6	----	26	244	−45.6	----	10	221	−56.3	----	14	223	−56.9	----
12,000	23	184	−53.3	----	10	189	−53.9	----	18	188	−55.6	----	13	212	−51.0	----	25	210	−51.6	----	9	188	−55.5	----	9	189	−58.6	----
13,000	19	157	−52.4	----	7	161	−54.1	----	17	161	−55.1	----	11	182	−58.2	----	23	180	−57.0	----	5	162	−56.6	----	9	161	−57.4	----
14,000	16	134	−52.3	----	5	137	−54.1	----	16	138	−56.0	----	8	154	−65.5	----	23	153	−63.8	----					6	137	−57.6	----
15,000	12	115	−52.7	----	5	118	−54.1	----	14	118	−55.9	----	7	130	−72.1	----	21	129	−70.9	----								
16,000	6	99	−56.8	----					8	100	−56.4	----	5	110	−77.0	----	20	109	−77.9	----								
17,000									5	85	−57.5	----					16	92	−82.2	----								
18,000																	11	77	−83.4	----								
19,000																	6	64	−79.5	----								
20,000																	5	54	−73.7	----								

Altitude (meters) m. s. l.	Washington, D. C. (25 m.)				Altitude (meters) m. s. l.	Washington, D. C. (25 m.)				Altitude (meters) m. s. l.	Washington, D. C. (25 m.)			Altitude (meters) m. s. l.	Washington, D. C. (25 m.)		
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,019	6.9	[3]63	2,500	31	750	−2.9	[3]48	7,000	29	412	−30.6	[3]47	12,000	12	195	−56.6	------
500	31	961	6.2	[3]55	3,000	31	703	−5.2	[3]46	8,000	26	359	−36.5	----	13,000	11	167	−56.5	------
1,000	31	904	3.0	[3]57	4,000	30	619	−10.1	[3]43	9,000	24	310	−43.5	------	14,000	9	141	−56.8	------
1,500	31	850	0.7	[3]54	5,000	30	543	−16.5	[3]39	10,000	21	267	−50.3	------	15,000	8	120	−58.2	------
2,000	31	798	−1.2	[3]54	6,000	29	474	−23.5	[3]44	11,000	15	229	−56.1	------	16,000	6	103	−58.7	------

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during April 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y.[1] (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (7 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	----	------	------	----	30	836	17.0	[2]25	30	1,017	18.4	[2]79	30	982	14.5	62	26	956	7.5	54	19	913	12.9	[2]56	30	1,014	21.3	[2]86
500	----	------	------	----	----	------	------	----	30	960	18.6	[2]48	30	960	15.2	59	----	------	------	----	----	------	------	----	30	958	19.4	[2]73
1,000	----	------	------	----	----	------	------	----	30	906	15.7	[2]42	30	904	12.3	57	26	900	6.7	52	19	899	13.7	[2]48	30	904	18.5	[2]43
1,500	----	------	------	----	----	------	------	----	30	854	12.7	[2]44	30	852	9.2	58	26	846	4.4	53	19	847	11.6	[2]41	30	853	16.5	[2]28
2,000	----	------	------	----	30	800	16.3	[2]23	30	804	10.3	[2]36	30	802	6.4	60	26	796	1.5	52	19	797	8.2	[2]46	30	803	14.2	[2]24
2,500	----	------	------	----	30	754	12.7	[2]24	30	757	8.1	[2]30	30	754	4.2	57	26	748	−1.4	51	19	750	4.7	[2]50	30	757	11.7	[2]22
3,000	----	------	------	----	30	710	8.5	[2]29	30	712	5.3	[2]31	30	709	1.9	54	26	702	−4.2	50	19	705	0.9	[2]56	30	713	8.8	[2]22
4,000	----	------	------	----	30	628	−0.3	[2]42	30	629	−0.6	[2]31	29	626	−3.5	51	26	618	−9.6	48	19	622	−6.2	[2]56	30	631	2.2	[2]23
5,000	----	------	------	----	30	553	−8.7	[2]55	30	554	−7.1	[2]28	28	551	−10.0	50	25	542	−16.0	48	19	546	−12.7	[2]49	30	557	−4.6	[2]26
6,000	----	------	------	----	30	485	−16.6	[2]57	30	487	−13.6	----	27	483	−16.8	48	25	474	−22.5	48	19	478	−19.5	[2]41	29	480	−11.5	[2]25
7,000	----	------	------	----	30	424	−23.7	[2]46	30	426	−20.1	----	27	422	−23.7	48	25	413	−29.6	47	19	417	−27.1	[2]44	29	420	−18.9	[2]30
8,000	----	------	------	----	30	369	−30.7	----	30	372	−27.6	----	26	368	−31.0	52	25	358	−36.5	54	18	363	−34.8	----	28	374	−26.4	----
9,000	----	------	------	----	30	320	−37.7	----	30	322	−35.5	----	26	318	−38.7	53	25	309	−43.3	----	16	313	−42.6	----	27	325	−34.2	----
10,000	----	------	------	----	30	276	−44.7	----	29	279	−42.7	----	26	275	−46.2	----	22	266	−49.2	----	14	269	−49.3	----	26	282	−41.8	----
11,000	----	------	------	----	29	238	−51.1	----	29	240	−49.8	----	24	236	−53.3	----	21	228	−54.0	----	11	231	−54.8	----	26	242	−49.1	----
12,000	----	------	------	----	29	203	−55.7	----	26	205	−56.0	----	20	202	−58.0	----	20	195	−56.1	----	11	197	−56.6	----	26	207	−56.1	----
13,000	----	------	------	----	27	173	−57.5	----	24	176	−58.2	----	18	172	−59.6	----	20	167	−55.0	----	9	169	−56.5	----	25	177	−60.4	----
14,000	----	------	------	----	23	148	−59.3	----	20	150	−59.8	----	15	146	−60.3	----	19	143	−54.4	----	9	145	−56.5	----	22	150	−63.7	----
15,000	----	------	------	----	23	126	−61.3	----	18	128	−62.5	----	11	124	−61.8	----	17	122	−54.9	----	7	124	−59.1	----	20	128	−67.0	----
16,000	----	------	------	----	20	107	−62.6	----	15	109	−64.1	----	8	106	−61.8	----	13	105	−55.8	----	5	106	−59.7	----	16	109	−70.5	----
17,000	----	------	------	----	14	91	−63.7	----	8	93	−66.7	----	----	------	------	----	12	90	−55.9	----	----	------	------	----	12	92	−71.6	----
18,000	----	------	------	----	9	78	−63.9	----	6	80	−66.8	----	----	------	------	----	8	77	−55.7	----	----	------	------	----	6	78	−73.0	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during April 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1193 m.)				Ely, Nev. (1,908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	988	2.0	[2]75	30	987	−1.7	77	30	1,016	14.8	77	30	837	11.7	[2]50	30	990	3.0	[2]73	30	880	20.6	[2]24	30	807	8.7	56
500	30	955	2.0	[2]67	30	950	−1.1	70	30	960	15.0	65	----	----	----	----	30	957	3.5	[2]58	----	----	----	----	----	----	----	----
1,000	30	897	−0.8	[2]65	30	892	−3.9	69	30	904	12.2	58	----	----	----	----	30	899	0.7	[2]56	----	----	----	----	----	----	----	----
1,500	30	842	−3.7	[2]64	30	837	−6.8	71	30	852	9.4	59	----	----	----	----	30	844	−1.8	[2]55	30	849	20.9	[2]23	----	----	----	----
2,000	30	790	−6.4	[2]63	30	785	−8.8	70	30	802	6.7	54	30	800	11.7	[2]41	30	792	−4.1	[2]49	30	801	17.3	[2]24	30	799	9.5	58
2,500	30	741	−8.8	[2]58	30	736	−10.9	67	30	754	3.9	51	30	753	8.2	[2]43	30	744	−5.9	[2]44	30	785	13.2	[2]25	30	752	8.0	54
3,000	30	694	−11.1	[2]56	30	689	−13.3	67	30	709	1.6	51	30	708	4.8	[2]46	30	698	−8.4	[2]42	30	711	8.9	[2]25	30	708	3.7	51
4,000	30	609	−15.8	[2]45	30	603	−18.9	61	29	625	−3.6	49	30	626	−2.5	[2]52	30	612	−13.7	[2]45	30	629	0.6	[2]29	29	625	−4.1	53
5,000	30	533	−21.3	[2]46	27	528	−24.5	59	27	551	−10.1	44	30	551	−10.3	[2]60	29	536	−19.3	[2]46	30	554	−7.4	[2]32	29	550	−11.6	54
6,000	30	464	−27.5	[2]42	25	459	−31.2	56	26	484	−16.7	43	30	483	−17.7	[2]54	28	468	−25.7	----	29	487	−14.8	[2]31	28	481	−18.6	53
7,000	30	403	−34.4	[2]52	23	397	−38.0	48	24	423	−23.5	42	29	422	−24.9	[2]50	28	407	−32.7	----	28	426	−21.7	[2]29	28	420	−25.5	52
8,000	29	349	−40.9	----	22	343	−43.7	----	22	368	−30.9	40	28	367	−32.8	----	28	352	−39.3	----	28	371	−29.1	[2]27	26	366	−32.7	49
9,000	28	300	−46.3	----	21	295	−47.8	----	21	319	−38.5	----	27	317	−40.3	----	27	304	−45.0	----	28	321	−36.5	----	25	317	−40.3	----
10,000	28	258	−49.9	----	20	254	−49.9	----	19	276	−46.0	----	25	274	−47.9	----	26	262	−50.0	----	27	278	−43.6	----	22	274	−46.8	----
11,000	26	222	−51.6	----	18	218	−49.5	----	13	238	−51.5	----	25	234	−54.4	----	26	225	−53.2	----	26	240	−50.3	----	21	235	−52.5	----
12,000	26	190	−50.9	----	15	188	−49.8	----	9	203	−57.1	----	23	201	−58.0	----	25	193	−53.3	----	26	205	−56.1	----	21	201	−56.6	----
13,000	24	163	−50.9	----	15	161	−49.8	----	----	----	----	----	20	171	−60.4	----	24	165	−52.4	----	23	175	−59.6	----	21	172	−58.3	----
14,000	21	140	−52.0	----	15	138	−50.6	----	----	----	----	----	15	146	−60.4	----	23	142	−53.9	----	19	150	−62.1	----	21	146	−58.6	----
15,000	17	120	−53.9	----	11	118	−51.2	----	----	----	----	----	13	124	−60.9	----	20	121	−55.5	----	17	126	−63.3	----	18	125	−59.8	----
16,000	13	102	−56.3	----	8	101	−51.8	----	----	----	----	----	10	105	−62.7	----	16	104	−56.7	----	12	108	−63.7	----	18	106	−61.6	----
17,000	8	88	−56.5	----	7	87	−52.2	----	----	----	----	----	6	88	−63.0	----	11	88	−56.8	----	7	91	−65.5	----	17	90	−62.8	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13	77	−63.7	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	65	−63.2	----

Altitude (meters) m. s. l.	Great Falls, Mont., (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Mazatlan, Mexico (80 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	886	9.9	[2]81	30	997	8.9	70	30	975	2.6	[2]60	29	995	6.1	[2]77	30	1,017	19.0	[2]84	24	1,011	5.5	[2]69	29	1,004	21.7	80
500	----	----	----	----	30	958	9.1	68	30	956	3.1	[2]54	29	957	6.4	[2]60	30	960	18.1	[2]61	24	956	4.1	[2]57	29	957	21.8	64
1,000	----	----	----	----	30	902	6.4	67	30	899	0.5	[2]55	29	900	4.0	[2]56	30	905	16.3	[2]48	24	898	1.8	[2]60	27	904	21.7	49
1,500	30	847	8.8	[2]47	30	849	3.6	66	30	844	−2.7	[2]61	29	846	1.5	[2]56	30	854	14.3	[2]37	24	844	−0.9	[2]59	27	853	19.7	42
2,000	30	797	5.4	[2]50	30	797	1.0	66	30	792	−5.0	[2]57	29	795	−0.7	[2]50	30	804	12.2	[2]33	24	792	−2.7	[2]55	26	804	17.3	33
2,500	30	749	2.0	[2]54	30	749	−1.4	64	30	743	−7.1	[2]51	29	746	−2.6	[2]49	30	757	9.5	[2]29	24	744	−5.4	[2]54	26	758	14.3	30
3,000	30	704	−1.5	[2]58	29	703	−3.7	60	30	697	−9.7	[2]51	28	701	−5.4	[2]44	30	713	6.7	[2]27	24	697	−8.0	[2]50	25	714	11.0	28
4,000	30	620	−8.4	[2]60	29	619	−9.0	57	29	611	−15.4	[2]47	28	616	−10.9	[2]49	30	630	−0.1	[2]28	24	612	−13.0	[2]48	25	632	4.2	29
5,000	30	544	−14.8	[2]61	27	543	−15.5	55	29	535	−21.5	[2]47	27	541	−16.6	[2]46	30	555	−6.9	[2]24	24	537	−18.9	[2]43	23	559	−2.9	32
6,000	30	476	−21.9	[2]61	27	475	−22.1	52	29	466	−28.3	----	24	472	−23.8	[2]48	30	488	−13.6	----	23	469	−25.3	----	23	492	−10.0	34
7,000	29	415	−29.2	----	27	414	−28.4	50	28	405	−34.6	----	24	410	−30.7	[2]50	30	427	−20.5	----	23	408	−31.6	----	22	431	−17.7	32
8,000	26	359	−37.0	----	27	359	−34.5	48	28	350	−40.7	----	24	356	−37.6	----	30	372	−28.0	----	19	352	−37.5	----	20	376	−25.5	32
9,000	25	310	−43.9	----	26	311	−41.1	----	24	303	−46.4	----	22	307	−44.2	----	30	323	−35.8	----	18	305	−42.8	----	18	327	−32.8	29
10,000	24	267	−50.8	----	26	268	−47.6	----	23	260	−50.3	----	18	264	−49.3	----	29	279	−43.4	----	18	263	−48.5	----	17	284	−40.3	----
11,000	22	229	−56.2	----	26	230	−53.2	----	20	222	−51.9	----	18	226	−54.0	----	27	240	−50.3	----	16	226	−52.6	----	15	244	−48.1	----
12,000	21	195	−57.0	----	26	197	−56.0	----	20	190	−51.6	----	16	194	−55.0	----	26	206	−56.3	----	14	193	−53.1	----	15	209	−55.1	----
13,000	19	166	−55.3	----	23	168	−55.2	----	14	163	−50.8	----	14	166	−54.3	----	24	175	−60.0	----	11	166	−53.0	----	11	178	−61.3	----
14,000	16	142	−55.4	----	20	144	−55.4	----	11	140	−51.4	----	10	143	−56.7	----	19	149	−61.2	----	8	142	−54.9	----	10	152	−64.9	----
15,000	14	122	−56.0	----	18	123	−56.8	----	7	120	−53.0	----	6	122	−57.7	----	19	127	−63.4	----	8	121	−57.1	----	10	128	−68.4	----
16,000	7	104	−57.0	----	15	105	−58.3	----	5	103	−53.3	----	----	----	----	----	13	108	−65.8	----	----	----	----	----	9	109	−71.6	----
17,000	----	----	----	----	9	90	−60.0	----	----	----	----	----	----	----	----	----	9	92	−68.0	----	----	----	----	----	8	92	−73.8	----
18,000	----	----	----	----	5	76	−58.3	----	----	----	----	----	----	----	----	----	7	77	−66.4	----	----	----	----	----	8	78	−71.8	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	66	−65.8	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	968	13.2	62	30	1,017	20.8	79	30	996	13.1	[2]64	22	1,018	10.3	[2]64	30	1,016	13.5	[2]76	30	969	16.5	[2]61	15	981	11.1	[2]63
500	29	958	12.9	63	30	960	19.0	79	30	959	12.4	[2]55	22	959	8.6	[2]54	30	958	11.2	[2]66	30	957	17.2	[2]54	15	958	10.6	[2]55
1,000	29	902	10.1	64	30	906	15.4	81	30	903	9.7	[2]53	22	902	5.7	[2]48	30	903	10.1	[2]51	30	902	16.5	[2]44	15	902	8.7	[2]53
1,500	29	849	6.5	68	30	854	12.8	76	30	850	6.5	[2]55	22	848	2.7	[2]53	30	850	8.5	[2]43	30	851	13.7	[2]47	15	849	6.7	[2]50
2,000	29	798	2.8	73	30	804	10.5	65	30	799	4.2	[2]57	22	797	−0.2	[2]53	30	800	6.3	[2]35	30	801	11.2	[2]48	15	798	4.6	[2]48
2,500	29	750	−0.5	77	30	757	8.7	54	30	752	1.6	[2]54	22	748	−2.9	[2]49	30	752	3.8	[2]33	30	754	8.7	[2]43	15	751	2.4	[2]49
3,000	29	705	−3.0	73	30	713	6.2	49	30	706	−1.0	[2]49	22	702	−5.6	[2]46	29	707	1.0	[2]34	30	710	6.2	[2]39	15	706	0.2	[2]53
4,000	29	621	−8.2	60	29	630	0.5	43	28	622	−6.8	[2]41	22	618	−10.9	[2]39	29	624	−5.5	[2]38	30	628	−0.9	[2]39	15	622	−5.6	[2]56
5,000	28	545	−14.5	55	27	556	−5.5	38	28	547	−12.9	[2]45	22	542	−16.7	[2]33	29	548	−11.9	[2]37	28	552	−8.5	[2]39	15	547	−12.0	[2]48
6,000	27	477	−20.3	54	25	489	−11.6	38	28	479	−19.5	[2]44	19	474	−23.0	----	29	481	−18.6	[2]37	27	485	−15.1	[2]38	15	479	−18.7	[2]49
7,000	27	416	−27.0	53	25	428	−18.5	36	28	418	−26.6	[2]44	18	414	−29.4	----	29	420	−25.7	[2]41	27	424	−22.1	[2]38	15	418	−25.8	----
8,000	26	361	−34.2	50	25	374	−25.6	38	28	362	−33.8	----	----	----	----	----	29	365	−33.1	[2]47	26	369	−30.2	----	15	364	−33.6	----
9,000	23	311	−42.2	----	23	325	−33.2	31	27	313	−41.1	----	----	----	----	----	28	315	−40.2	----	24	320	−37.9	----	15	314	−41.1	----
10,000	21	268	−49.0	----	20	281	−40.4	----	25	270	−48.1	----	----	----	----	----	28	272	−46.8	----	23	277	−45.3	----	15	271	−48.3	----
11,000	21	230	−53.0	----	18	242	−47.6	----	25	232	−54.4	----	----	----	----	----	26	234	−52.6	----	21	238	−52.4	----	15	232	−54.7	----
12,000	21	197	−54.9	----	17	208	−54.5	----	24	198	−58.3	----	----	----	----	----	24	200	−56.2	----	17	204	−57.8	----	14	198	−60.1	----
13,000	20	168	−54.6	----	16	178	−59.7	----	22	170	−58.9	----	----	----	----	----	20	170	−55.8	----	13	174	−60.7	----	13	170	−60.1	----
14,000	19	144	−55.5	----	15	151	−63.2	----	17	145	−58.6	----	----	----	----	----	19	145	−56.3	----	10	150	−60.5	----	12	144	−58.9	----
15,000	18	123	−57.2	----	13	128	−65.9	----	14	123	−60.3	----	----	----	----	----	16	124	−58.1	----	7	128	−62.1	----	10	123	−58.5	----
16,000	13	106	−57.9	----	11	109	−69.7	----	11	104	−62.2	----	----	----	----	----	12	106	−59.8	----	7	109	−63.9	----	6	106	−58.8	----
17,000	10	90	−57.7	----	6	92	−73.6	----	6	89	−62.6	----	----	----	----	----	7	90	−60.3	----	6	93	−65.4	----	5	90	−59.7	----
18,000	8	77	−58.5	----	5	78	−73.2	----	----	----	----	----	----	----	----	----	5	77	−59.3	----	5	79	−64.3	----	5	77	−60.0	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during April 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Pensacola, Fla.[3] (24 m.)				Phoenix, Ariz. (339 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface					29	971	21.1	37	28	1,010	0.9	72	30	996	11.7	[2]64	30	990	6.5	[2]60	30	988	20.4	[2]67	30	1,012	15.1	[2]81
500					29	954	24.5	33	28	952	1.6	72	30	958	11.2	[2]55	30	957	6.4	[2]52	30	959	20.1	[2]62	30	956	13.3	[2]72
1,000					29	900	21.9	30	28	895	−1.7	69	30	902	8.8	[2]55	30	900	3.5	[2]52	30	905	17.6	[2]56	30	901	13.2	[2]49
1,500					29	850	17.9	30	28	840	−4.4	70	30	849	6.1	[2]54	30	846	0.9	[2]54	30	853	15.8	[2]46	30	849	11.5	[2]40
2,000					29	800	13.7	31	28	788	−6.5	69	30	799	3.9	[2]54	30	795	−1.7	[2]50	30	804	13.7	[2]32	30	799	9.4	[2]33
2,500					29	754	9.4	32	28	739	−8.5	66	30	751	1.5	[2]53	30	746	−3.8	[2]44	30	758	11.3	[2]30	30	752	6.7	[2]31
3,000					29	710	5.5	34	28	692	−10.8	63	30	705	−0.9	[2]48	30	700	−6.5	[2]43	30	713	8.6	[2]26	30	708	3.7	[2]29
4,000					29	627	−1.9	31	25	607	−17.0	62	30	621	−6.7	[2]48	30	615	−12.1	[2]41	30	631	1.9	[2]24	29	625	−3.4	[2]25
5,000					25	552	−8.7	33	23	530	−23.8	62	30	546	−13.3	[2]49	30	539	−18.2	[2]41	30	557	−5.0	[2]27	29	550	−10.0	[2]29
6,000					24	484	−16.0	32	21	462	−29.8	62	29	478	−20.4	[2]49	30	471	−24.4	[2]40	30	490	−12.2	[2]30	29	482	−16.7	----
7,000					23	423	−23.2	32	21	400	−35.2	41	29	416	−27.2	[2]49	30	409	−31.6	----	30	429	−19.5	[2]31	29	421	−23.7	----
8,000					23	368	−30.1	31	19	346	−40.7	----	27	362	−34.6	[2]45	30	354	−38.3	----	28	373	−27.0	----	14	369	−30.4	----
9,000					23	319	−36.3	32	19	298	−45.0	----	26	312	−41.9	----	30	306	−44.5	----	28	324	−34.7	----	14	318	−37.8	----
10,000					23	276	−42.6	----	14	257	−48.3	----	24	269	−48.7	----	29	263	−49.9	----	27	280	−42.4	----	14	275	−45.1	----
11,000					21	238	−48.7	----	13	222	−51.5	----	19	231	−54.4	----	28	225	−52.9	----	27	241	−50.1	----	12	236	−52.4	----
12,000					20	204	−53.2	----	11	190	−49.9	----	18	197	−56.9	----	26	193	−53.1	----	26	207	−56.6	----	11	202	−56.3	----
13,000					20	174	−56.4	----	8	162	−50.4	----	15	169	−57.1	----	22	165	−52.3	----	24	176	−60.2	----	10	172	−58.0	----
14,000					20	148	−58.3	----	6	139	−50.9	----	11	144	−57.1	----	16	141	−52.4	----	22	150	−62.0	----	8	148	−59.5	----
15,000					19	126	−60.3	----					11	123	−58.1	----	13	121	−54.5	----	20	128	−64.2	----	7	125	−61.9	----
16,000					19	108	−62.2	----					11	105	−59.6	----	8	105	−57.8	----	13	109	−66.9	----	6	105	−64.8	----
17,000					18	92	−63.8	----					8	89	−60.5	----	7	89	−57.8	----	7	92	−67.0	----				
18,000					15	78	−64.6	----					6	76	−60.1	----					6	78	−67.0	----				
19,000					9	66	−64.2	----																				
20,000					7	57	−62.2	----																				

Altitude (meters) m. s. l.	San Juan, P. R. (15 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)[4]				Tacubaya, Mexico (2,306 m.)				Tapachula, Mexico (115 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,014	23.7	[2]85	30	990	−0.1	78	28	1,014	12.7	[2]65	30	945	9.7	[2]72	----	----	----	----	29	774	16.7	44	19	1,000	26.2	78
500	30	960	20.6	[2]83	30	956	−0.2	77	28	957	10.0	[2]61	----	----	----	----	----	----	----	----	----	----	----	----	19	957	25.2	81
1,000	29	906	17.6	[2]82	30	898	−2.5	74	28	901	6.5	[2]63	30	900	9.9	[2]55	----	----	----	----	----	----	----	----	19	904	22.1	79
1,500	29	854	14.7	[2]78	30	843	−5.4	72	28	847	3.1	[2]64	30	847	6.1	[2]58	----	----	----	----	----	----	----	----	19	854	19.1	88
2,000	29	805	12.3	[2]68	30	790	−8.1	70	28	796	−0.2	[2]69	30	797	2.3	[2]61	----	----	----	----	----	----	----	----	19	805	16.3	90
2,500	29	758	10.3	[2]56	30	740	−10.0	68	27	747	−3.5	[2]68	30	749	−1.2	[2]60	----	----	----	----	29	757	15.3	45	19	759	13.8	92
3,000	29	714	8.4	[2]45	30	694	−12.6	67	27	702	−6.1	[2]67	29	703	−4.1	[2]59	----	----	----	----	29	713	11.9	47	19	718	11.4	88
4,000	28	632	3.6	[2]36	29	608	−17.4	67	27	617	−11.7	[2]62	29	618	−10.2	[2]52	----	----	----	----	29	632	4.6	52	19	634	5.6	83
5,000	27	558	−2.1	[2]34	28	532	−22.6	66	27	540	−18.4	[2]65	29	543	−16.5	----	----	----	----	----	29	558	−2.9	60	19	561	0.3	56
6,000	26	492	−8.0	[2]36	25	463	−29.2	65	27	472	−25.3	[2]62	28	474	−23.3	----	----	----	----	----	27	491	−9.4	58	19	495	−5.6	42
7,000	26	432	−14.4	[2]36	25	402	−36.1	63	26	410	−31.6	[2]69	25	412	−30.8	----	----	----	----	----	26	431	−15.7	49	19	435	−12.5	38
8,000	26	378	−21.3	[2]36	24	347	−42.1	----	22	356	−38.1	----	25	357	−38.4	----	----	----	----	----	24	377	−22.4	44	18	380	−19.6	33
9,000	25	328	−29.2	[2]41	23	298	−46.4	----	22	306	−44.7	----	24	308	−45.5	----	----	----	----	----	23	328	−29.8	45	17	331	−26.7	34
10,000	25	285	−36.9	----	21	257	−49.3	----	22	264	−50.3	----	23	264	−51.5	----	----	----	----	----	22	285	−37.4	33	17	288	−34.3	34
11,000	22	246	−44.8	----	18	221	−51.2	----	17	226	−53.0	----	21	226	−54.5	----	----	----	----	----	20	246	−45.2	----	17	249	−42.1	----
12,000	22	212	−52.3	----	17	189	−50.3	----	16	193	−53.7	----	20	193	−54.2	----	----	----	----	----	19	212	−51.8	----	17	214	−50.0	----
13,000	22	181	−59.2	----	14	162	−49.1	----	16	165	−53.2	----	19	166	−53.0	----	----	----	----	----	16	180	−58.9	----	17	184	−57.9	----
14,000	15	154	−65.9	----	11	139	−49.8	----	12	141	−53.9	----	14	142	−53.4	----	----	----	----	----	15	154	−64.6	----	16	156	−66.3	----
15,000	11	130	−71.2	----	8	120	−50.3	----	7	121	−54.1	----	10	121	−54.9	----	----	----	----	----	15	130	−70.2	----	15	132	−73.1	----
16,000	11	110	−75.2	----	5	102	−51.2	----	7	103	−54.3	----	9	104	−55.4	----	----	----	----	----	11	110	−74.6	----	15	111	−77.7	----
17,000	9	92	−77.2	----																	8	93	−77.7	----	13	93	−80.3	----
18,000	7	78	−74.6	----																	8	78	−78.7	----	9	78	−81.3	----
19,000	6	66	−69.9	----																					5	65	−76.2	----
20,000	5	56	−65.1	----																								

Altitude (meters) m. s. l.	Stations and elevations in meters above sea level: Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D.C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,013	8.8	[2]83	20	1,015	10.3	[2]76	30	1,013	9.3	[2]56
500	30	957	6.8	[2]74	20	957	6.6	[2]75	30	956	7.2	[2]51
1,000	30	900	4.0	[2]68	20	901	2.7	[2]79	30	900	4.7	[2]52
1,500	30	846	1.4	[2]64	20	847	−0.3	[2]74	30	846	2.1	[2]55
2,000	30	795	−1.4	[2]59	20	795	−2.7	[2]74	30	795	−1.0	[2]56
2,500	30	746	−4.2	[2]52	20	746	−5.6	[2]67	30	747	−2.6	[2]44
3,000	30	700	−7.1	[2]51	20	700	−8.6	[2]61	30	700	−5.0	[2]39
4,000	30	615	−12.7	[2]47	20	615	−14.1	[2]51	30	616	−10.9	[2]36
5,000	30	539	−19.3	[2]50	20	539	−19.6	[2]55	30	540	−17.2	[2]34
6,000	29	470	−26.3	[2]49	20	472	−25.5	[2]61	30	472	−23.6	[2]28
7,000	29	408	−33.2	[2]54	19	409	−32.2	[2]65	30	411	−30.4	[2]44

Altitude (meters) m. s. l.	Stations and elevations in meters above sea level: Tatoosh Island, Wash. (31 m.)				Tongue Point Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
8,000	29	353	−40.0	----	17	352	−39.7	----	29	356	−36.6	----
9,000	29	305	−46.0	----	15	305	−45.5	----	27	308	−42.6	----
10,000	29	262	−50.6	----	14	262	−51.0	----	26	266	−48.6	----
11,000	28	225	−53.0	----	14	224	−54.2	----	22	228	−52.0	----
12,000	24	192	−53.0	----	13	193	−55.3	----	21	195	−54.0	----
13,000	23	165	−51.9	----	10	165	−53.7	----	18	167	−53.8	----
14,000	19	141	−53.3	----	9	141	−53.8	----	17	142	−53.9	----
15,000	13	122	−55.0	----	7	121	−55.1	----	15	122	−55.6	----
16,000	9	104	−56.5	----	6	104	−55.2	----	12	104	−56.5	----
17,000	----	----	----	----	----	----	----	----	6	89	−57.1	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

[4] Observations temporarily discontinued.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during May 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (7 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,006	12.3	[2]79	31	834	18.8	[2]30	31	1,017	23.5	[2]84	31	983	20.4	70	31	954	10.5	63	21	914	14.6	[2]46	31	1,011	24.8	[2]86
500	31	958	11.9	[2]70					31	961	22.9	[2]64	31	961	21.4	66									31	956	22.7	[2]75
1,000	31	902	9.6	[2]69					31	907	20.3	[2]61	31	907	18.9	63	31	899	9.7	63	21	901	14.7	[2]42	31	903	21.4	[2]57
1,500	31	850	7.0	[2]70					31	856	16.9	[2]57	31	856	16.0	64	31	846	7.0	63	21	848	11.9	[2]39	31	852	19.3	[2]43
2,000	31	799	4.3	[2]69	31	798	17.7	[2]27	31	807	14.6	[2]48	31	806	13.0	63	31	796	3.9	63	21	798	8.0	[2]45	31	804	17.4	[2]35
2,500	31	751	1.8	[2]65	31	752	14.3	[2]27	31	760	12.2	[2]45	31	760	10.2	57	31	748	0.7	63	21	751	4.0	[2]52	31	758	15.3	[2]31
3,000	31	706	−0.9	[2]64	31	709	10.6	[2]30	31	716	9.6	[2]38	31	715	7.7	51	31	702	−2.8	64	21	706	0.4	[2]56	31	714	12.6	[2]29
4,000	31	622	−5.7	[2]56	31	628	2.3	[2]37	31	634	3.8	[2]32	31	633	2.0	46	31	618	−8.9	64	21	622	−6.7	[2]55	30	634	6.1	[2]28
5,000	31	547	−11.1	[2]50	31	554	−6.0	[2]47	31	560	−2.2	[2]26	31	558	−4.0	48	30	543	−15.2	59	21	547	−13.4	[2]50	30	560	−0.6	[2]30
6,000	31	480	−17.1	[2]53	31	486	−13.6	[2]46	30	493	−7.9	----	31	491	−10.6	44	30	475	−22.0	58	21	479	−20.2	[2]47	30	493	−7.4	[2]34
7,000	31	419	−23.8	[2]53	29	426	−20.5	[2]40	30	433	−14.6	----	29	430	−17.6	43	30	414	−29.3	57	21	418	−27.3	[2]45	30	433	−14.5	[2]39
8,000	30	364	−31.3	[2]61	29	371	−27.7	[2]47	30	378	−21.8	----	27	376	−24.9	41	28	359	−36.0	57	21	363	−34.2	----	30	379	−21.3	----
9,000	30	315	−38.0	----	27	322	−35.4	----	30	329	−29.1	----	27	326	−32.4	40	27	310	−43.4	----	20	313	−40.9	----	30	330	−28.7	----
10,000	30	272	−44.7	----	27	278	−42.7	----	30	286	−36.5	----	25	283	−39.9	35	27	267	−49.0	----	20	271	−46.8	----	30	286	−36.0	----
11,000	29	234	−50.7	----	26	240	−49.6	----	30	247	−43.7	----	22	244	−47.2	----	26	229	−52.6	----	17	232	−51.3	----	29	248	−43.6	----
12,000	27	200	−55.6	----	26	205	−55.3	----	29	213	−50.6	----	22	210	−54.0	----	24	196	−54.0	----	15	200	−55.7	----	29	213	−51.3	----
13,000	26	172	−57.4	----	26	175	−57.9	----	27	182	−57.1	----	26	179	−59.7	----	23	168	−53.4	----	13	170	−57.0	----	29	182	−58.2	----
14,000	24	146	−57.0	----	26	150	−59.6	----	25	155	−61.7	----	19	152	−63.0	----	20	143	−52.8	----	11	145	−56.0	----	29	155	−64.3	----
15,000	24	125	−57.8	----	24	127	−60.9	----	23	132	−64.4	----	17	129	−64.3	----	18	123	−53.2	----	9	124	−55.4	----	26	132	−68.9	----
16,000	17	107	−57.4	----	22	109	−61.9	----	17	112	−66.6	----	16	110	−65.9	----	13	105	−54.2	----	7	106	−56.4	----	24	111	−72.7	----
17,000	11	91	−58.9	----	18	92	−63.3	----	12	95	−67.8	----	14	93	−67.1	----	7	91	−54.7	----	6	90	−56.6	----	18	93	−75.3	----
18,000	----	----	----	----	12	78	−63.5	----	8	80	−68.0	----	6	80	−67.2	----	5	78	−56.4	----	----	----	----	----	9	78	−73.9	----
19,000	----	----	----	----	----	----	----	----	5	68	−67.0	----	----	----	----	----	----	----	----	----	----	----	----	----	6	67	−70.0	----

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	990	11.4	[2]83	31	993	7.0	[2]74	30	1,018	20.0	89	31	836	10.6	[2]67	31	990	12.0	[2]85	31	878	24.3	[2]24	31	807	11.6	34
500	31	958	12.5	[2]73	31	957	8.0	[2]62	30	962	20.0	72	----	----	----	----	31	957	13.0	[2]72	----	----	----	----	----	----	----	----
1,000	31	902	10.7	[2]68	31	900	6.0	[2]61	30	908	17.7	65	----	----	----	----	31	902	11.4	[2]64	----	----	----	----	----	----	----	----
1,500	31	849	8.0	[2]63	31	847	3.7	[2]60	30	856	15.0	60	----	----	----	----	31	849	8.6	[2]66	31	848	23.4	[2]22	----	----	----	----
2,000	31	799	5.4	[2]64	31	796	0.9	[2]57	30	806	12.5	55	31	799	9.8	[2]60	31	799	6.1	[2]63	31	800	20.3	[2]22	31	799	11.9	34
2,500	31	751	2.8	[2]64	31	748	−1.8	[2]56	30	760	10.0	52	31	752	6.9	[2]60	31	751	3.5	[2]60	31	754	16.5	[2]22	31	752	9.5	34
3,000	31	706	0.3	[2]60	31	702	−4.9	[2]53	30	715	7.6	50	31	707	3.8	[2]61	31	706	0.7	[2]58	31	711	12.6	[2]23	31	708	5.4	35
4,000	30	623	−5.1	[2]54	31	617	−10.4	[2]45	28	633	2.0	44	31	624	−2.2	[2]58	31	623	−4.8	[2]49	31	630	4.6	[2]27	31	625	−2.8	39
5,000	30	548	−10.7	[2]49	31	542	−16.2	[2]43	28	559	−4.3	41	31	550	−9.5	[2]60	31	548	−10.5	[2]41	30	557	−3.1	[2]32	30	551	−9.9	44
6,000	30	480	−17.0	[2]46	31	474	−22.4	[2]45	27	491	−10.6	40	31	482	−16.6	[2]61	29	480	−16.8	[2]42	30	490	−10.6	[2]32	28	483	−16.7	44
7,000	30	420	−24.1	[2]48	30	413	−28.5	[2]50	25	431	−17.3	39	31	422	−23.9	[2]54	29	420	−23.5	[2]47	30	429	−17.7	[2]30	27	422	−23.7	43
8,000	30	365	−31.1	[2]50	29	358	−35.2	----	25	376	−24.2	38	29	367	−31.4	[2]57	29	365	−30.6	----	27	375	−25.2	[2]35	24	368	−30.3	42
9,000	30	316	−38.4	----	29	310	−41.7	----	22	328	−31.2	37	29	317	−38.9	[2]65	28	316	−37.7	----	26	326	−32.2	----	24	318	−37.5	53
10,000	30	273	−45.2	----	27	267	−47.8	----	20	284	−39.0	----	24	274	−45.8	----	28	273	−45.2	----	25	282	−39.4	----	23	275	−44.6	----
11,000	30	234	−51.4	----	27	230	−52.2	----	18	244	−46.5	----	21	236	−52.5	----	27	235	−51.2	----	23	244	−46.1	----	23	236	−50.8	----
12,000	30	201	−55.9	----	26	197	−54.0	----	12	210	−53.2	----	20	202	−55.9	----	25	202	−55.8	----	20	209	−52.5	----	21	203	−55.1	----
13,000	29	171	−57.3	----	25	168	−54.1	----	7	180	−59.1	----	19	172	−56.4	----	23	172	−57.5	----	15	179	−58.6	----	21	173	−58.6	----
14,000	26	146	−57.5	----	23	144	−54.5	----	6	153	−62.5	----	18	147	−57.7	----	21	147	−56.9	----	8	153	−62.9	----	21	148	−60.5	----
15,000	22	124	−58.2	----	17	123	−55.9	----	5	129	−66.1	----	16	125	−58.3	----	18	125	−58.0	----	5	130	−63.8	----	21	126	−59.9	----
16,000	19	106	−58.8	----	12	105	−55.4	----	----	----	----	----	15	107	−59.6	----	12	107	−58.6	----	----	----	----	----	17	107	−59.8	----
17,000	15	91	−58.8	----	6	89	−55.6	----	----	----	----	----	9	91	−60.0	----	10	91	−58.4	----	----	----	----	----	15	92	−60.8	----
18,000	9	78	−59.9	----	----	----	----	----	----	----	----	----	7	77	−60.0	----	----	----	----	----	----	----	----	----	11	78	−60.7	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	66	−61.2	----

Altitude (meters) m. s. l.	Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Mazatlan, Mexico (80 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	886	9.9	[2]55	31	997	16.6	[2]84	31	972	9.3	[2]70	31	994	12.5	[2]84	31	1,015	23.1	[2]89	30	1,013	15.0	[2]79	31	1,002	24.9	79
500	----	----	----	----	31	959	18.1	[2]68	31	954	10.0	[2]64	31	956	12.9	[2]72	31	959	21.6	[2]71	30	960	14.6	[2]65	31	956	24.7	56
1,000	----	----	----	----	31	905	15.5	[2]66	31	898	7.4	[2]62	31	901	11.4	[2]68	31	905	19.1	[2]63	30	905	12.2	[2]66	31	903	24.4	37
1,500	31	647	8.5	[2]52	31	853	12.5	[2]65	31	845	4.2	[2]64	31	849	9.2	[2]68	31	854	17.0	[2]48	30	852	9.2	[2]67	31	852	22.0	34
2,000	31	796	4.8	[2]54	31	803	9.6	[2]62	31	794	1.6	[2]63	31	798	6.9	[2]65	31	805	14.8	[2]39	30	802	6.4	[2]65	31	804	19.2	33
2,500	31	749	0.9	[2]60	31	756	6.6	[2]59	31	746	−1.6	[2]64	31	751	4.4	[2]64	31	758	12.4	[2]33	30	754	3.6	[2]67	31	758	16.1	31
3,000	31	703	−3.4	[2]66	31	711	4.0	[2]56	31	700	−4.7	[2]64	31	706	1.7	[2]64	31	714	9.9	[2]29	30	709	1.3	[2]68	31	715	13.0	30
4,000	31	619	−10.9	[2]72	30	628	−1.6	[2]49	31	616	−10.8	[2]57	30	623	−3.9	[2]62	31	633	3.7	[2]31	29	626	−4.1	[2]66	28	634	6.3	29
5,000	31	543	−17.3	[2]72	30	554	−7.0	[2]49	31	540	−16.6	[2]52	30	549	−9.7	[2]66	31	559	−3.0	[2]36	29	551	−9.8	[2]65	27	560	−0.7	31
6,000	30	474	−24.0	[2]72	30	486	−13.3	[2]47	31	472	−23.4	[2]54	30	481	−16.0	[2]65	31	492	−9.5	[2]32	29	483	−15.5	[2]64	26	494	−7.5	33
7,000	30	413	−31.0	----	29	426	−20.1	[2]45	31	411	−30.3	[2]50	30	421	−22.9	[2]68	31	432	−16.1	[2]34	29	423	−22.2	[2]72	26	434	−14.6	32
8,000	30	357	−38.3	----	29	371	−27.4	[2]51	31	356	−37.4	----	30	366	−30.3	----	31	377	−23.2	----	27	368	−28.8	----	25	379	−22.0	33
9,000	29	308	−45.3	----	28	322	−34.6	----	30	307	−44.4	----	29	317	−37.6	----	31	328	−30.7	----	26	319	−35.8	----	22	330	−29.3	32
10,000	28	265	−50.1	----	28	279	−42.2	----	30	264	−49.4	----	29	274	−44.8	----	31	285	−37.8	----	25	277	−42.6	----	21	287	−36.7	34
11,000	26	228	−53.0	----	27	240	−49.6	----	29	227	−52.3	----	26	236	−51.1	----	31	246	−45.2	----	25	238	−49.4	----	21	248	−44.0	----
12,000	24	194	−53.9	----	25	206	−56.9	----	26	195	−52.2	----	23	202	−56.2	----	31	211	−52.7	----	25	204	−55.3	----	21	213	−51.2	----
13,000	22	166	−52.6	----	25	175	−62.2	----	19	166	−51.7	----	21	173	−58.2	----	31	180	−59.3	----	23	174	−59.9	----	20	182	−58.5	----
14,000	17	143	−52.6	----	24	149	−63.0	----	17	142	−51.7	----	18	147	−57.9	----	31	153	−63.7	----	18	148	−60.8	----	18	155	−65.1	----
15,000	14	122	−53.4	----	18	127	−64.3	----	11	122	−52.4	----	13	125	−59.4	----	26	130	−66.8	----	16	126	−60.3	----	18	131	−70.4	----
16,000	13	105	−53.9	----	16	108	−65.1	----	8	104	−52.5	----	8	108	−60.8	----	24	111	−69.9	----	13	108	−60.7	----	17	111	−74.6	----
17,000	6	89	−53.5	----	16	92	−65.6	----	5	90	−52.9	----	8	92	−61.1	----	19	93	−71.7	----	6	92	−61.4	----	15	93	−77.0	----
18,000	----	----	----	----	11	78	−64.8	----	----	----	----	----	----	----	----	----	11	79	−69.4	----	----	----	----	----	12	78	−75.0	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	66	−71.6	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during May 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Medford, Oreg (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	970	15.7	49	31	1,018	24.0	85	30	995	20.2	[2] 72	15	1,020	18.7	[2] 74	31	1,014	15.7	[2] 68	31	967	17.6	[2] 81	31	978	15.1	[2] 70
500	31	960	15.4	49	31	961	21.9	87	30	959	19.7	[2] 62	15	962	17.2	[2] 62	31	957	15.1	[2] 51	31	955	17.9	[2] 76	31	955	14.5	[2] 63
1,000	31	905	12.1	52	31	907	18.8	84	30	905	17.0	[2] 62	15	908	15.0	[2] 56	31	902	15.7	[2] 30	31	901	17.6	[2] 67	31	900	11.8	[2] 61
1,500	31	852	8.2	55	31	856	16.0	79	30	853	13.9	[2] 59	15	856	12.4	[2] 52	31	851	13.4	[2] 25	31	850	16.6	[2] 57	31	848	9.1	[2] 57
2,000	31	801	4.5	61	31	807	13.2	73	30	803	10.8	[2] 61	15	805	9.7	[2] 50	31	801	10.6	[2] 25	31	801	14.9	[2] 47	31	798	7.2	[2] 55
2,500	31	754	1.5	63	31	760	10.8	64	30	756	8.3	[2] 56	15	758	7.0	[2] 47	31	754	7.6	[2] 25	31	755	12.0	[2] 45	31	751	4.8	[2] 51
3,000	31	708	−0.8	61	31	716	8.0	62	30	712	5.7	[2] 49	15	713	3.8	[2] 45	31	709	4.9	[2] 24	30	711	9.2	[2] 39	31	706	2.0	[2] 58
4,000	31	624	−5.8	50	30	634	2.5	56	30	630	−0.1	[2] 44	15	630	−2.3	[2] 39	30	627	−0.6	[2] 24	30	629	2.4	[2] 32	31	623	−3.6	[2] 50
5,000	31	548	−12.0	47	28	559	−3.1	53	30	555	−6.5	[2] 40	15	555	−7.8	[2] 36	30	553	−6.7	[2] 28	30	555	−4.5	[2] 30	31	549	−9.6	[2] 48
6,000	30	481	−18.3	46	28	492	−9.1	52	29	488	−13.1	[2] 46	14	486	−14.6	----	30	485	−13.6	[2] 29	30	488	−11.4	[2] 27	31	481	−16.5	[2] 44
7,000	29	420	−25.1	47	25	432	−16.0	47	29	427	−19.8	[2] 44	11	426	−21.2	----	29	425	−21.1	[2] 32	30	428	−18.5	[2] 26	30	420	−23.8	[2] 48
8,000	29	365	−32.2	51	25	377	−23.2	47	29	372	−27.0	[2] 47	----	----	----	----	29	370	−28.7	[2] 37	29	374	−25.6	----	30	366	−30.9	[2] 57
9,000	29	315	−39.4	52	23	328	−30.4	50	29	323	−34.7	----	----	----	----	----	28	321	−36.4	----	29	324	−33.1	----	29	317	−38.2	----
10,000	28	272	−46.3	----	22	285	−38.0	48	29	280	−42.4	----	----	----	----	----	25	278	−44.2	----	29	281	−40.5	----	28	274	−44.7	----
11,000	27	234	−52.4	----	19	246	−45.7	----	28	240	−49.6	----	----	----	----	----	25	239	−51.6	----	29	242	−47.9	----	25	236	−51.2	----
12,000	25	200	−56.5	----	19	211	−52.8	----	28	206	−56.9	----	----	----	----	----	24	204	−57.4	----	28	208	−54.4	----	25	202	−56.7	----
13,000	24	170	−58.2	----	18	180	−58.4	----	26	176	−61.8	----	----	----	----	----	21	174	−59.7	----	28	177	−59.4	----	22	172	−57.5	----
14,000	22	146	−59.8	----	16	154	−64.0	----	23	149	−63.4	----	----	----	----	----	18	149	−61.8	----	26	151	−61.7	----	17	147	−57.0	----
15,000	22	124	−59.5	----	15	130	−67.8	----	21	127	−64.7	----	----	----	----	----	17	127	−61.8	----	24	128	−63.0	----	12	125	−58.0	----
16,000	14	106	−59.8	----	11	110	−70.6	----	19	108	−66.8	----	----	----	----	----	17	108	−62.1	----	21	109	−63.7	----	9	107	−59.2	----
17,000	9	91	−59.7	----	10	93	−73.4	----	16	92	−68.0	----	----	----	----	----	13	92	−61.6	----	15	92	−64.2	----	6	92	−59.7	----
18,000	5	77	−58.6	----	7	79	−74.1	----	13	77	−66.8	----	----	----	----	----	12	78	−61.6	----	12	78	−64.0	----	----	----	----	----
19,000	----	----	----	----	6	67	−70.3	----	5	66	−65.6	----	----	----	----	----	7	67	−61.7	----	6	66	−63.0	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	56	−60.4	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	21	1,015	24.2	[2] 83	30	968	26.1	23	31	971	14.5	[2] 77	31	1,015	9.6	84	31	994	17.3	[2] 77	31	986	12.4	[2] 72	31	985	23.4	[2] 75
500	21	962	22.6	[2] 73	30	951	28.4	21	31	958	14.8	[2] 72	31	958	11.0	72	31	956	16.7	[2] 70	31	955	12.6	[2] 62	31	957	22.8	[2] 72
1,000	21	909	20.0	[2] 66	30	898	26.0	20	31	904	13.9	[2] 62	31	902	8.7	69	31	902	14.7	[2] 68	31	899	9.5	[2] 64	31	904	20.8	[2] 66
1,500	21	857	16.8	[2] 59	30	848	21.9	20	31	852	11.4	[2] 62	31	849	6.2	69	31	850	12.5	[2] 64	31	846	6.8	[2] 67	31	853	18.5	[2] 57
2,000	21	808	14.3	[2] 49	30	800	17.5	21	31	802	8.5	[2] 63	31	798	3.2	70	31	800	10.2	[2] 56	31	796	4.0	[2] 66	31	804	16.7	[2] 42
2,500	21	761	11.7	[2] 40	30	754	13.7	22	31	754	5.4	[2] 63	31	750	0.4	71	31	754	7.9	[2] 52	31	748	1.3	[2] 63	31	758	14.6	[2] 21
3,000	21	717	9.1	[2] 36	30	710	9.3	23	31	710	2.9	[2] 56	31	705	−1.9	69	31	709	5.1	[2] 52	30	703	−1.8	[2] 66	31	714	12.0	[2] 24
4,000	20	634	3.4	[2] 36	28	629	2.2	26	31	626	−2.9	[2] 56	29	620	−7.4	64	30	627	−0.6	[2] 45	28	620	−7.6	[2] 59	31	633	5.9	[2] 25
5,000	19	560	−3.2	[2] 29	28	555	−4.4	26	31	552	−8.5	[2] 55	26	545	−13.6	57	29	552	−6.5	[2] 50	27	545	−13.7	[2] 51	30	559	−1.2	[2] 27
6,000	19	493	−9.4	[2] 36	27	488	−11.0	23	31	484	−14.3	[2] 47	26	477	−19.5	54	28	486	−13.2	[2] 46	27	477	−20.3	[2] 44	30	492	−8.4	[2] 27
7,000	19	433	−15.9	----	24	428	−18.3	23	31	424	−20.9	[2] 48	24	417	−25.6	53	27	425	−20.2	[2] 46	25	415	−27.9	[2] 44	29	433	−15.0	----
8,000	17	378	−23.0	----	22	374	−25.7	25	31	369	−28.0	[2] 51	22	362	−32.7	49	27	370	−27.4	----	25	360	−34.9	----	29	378	−21.9	----
9,000	17	329	−30.4	----	19	325	−33.3	28	31	320	−35.6	[2] 53	22	314	−39.5	----	27	322	−35.2	----	25	311	−42.2	----	29	329	−29.1	----
10,000	13	284	−37.4	----	17	282	−41.1	----	31	277	−43.4	----	22	271	−46.0	----	27	278	−43.0	----	24	268	−48.8	----	29	286	−36.7	----
11,000	11	246	−45.8	----	16	243	−48.5	----	31	238	−50.8	----	19	234	−52.6	----	25	240	−50.3	----	24	230	−53.4	----	28	247	−43.9	----
12,000	9	211	−54.0	----	16	208	−55.0	----	30	204	−56.9	----	19	200	−56.5	----	25	205	−56.4	----	22	197	−54.7	----	27	212	−51.1	----
13,000	7	180	−59.0	----	16	177	−59.0	----	29	174	−59.4	----	16	170	−57.1	----	25	175	−59.1	----	20	168	−53.7	----	24	182	−57.4	----
14,000	5	154	−63.5	----	16	151	−60.9	----	24	149	−59.9	----	14	145	−58.2	----	22	149	−60.0	----	20	144	−54.4	----	20	155	−61.9	----
15,000	----	----	----	----	16	128	−62.0	----	22	127	−60.1	----	14	124	−58.7	----	21	127	−60.8	----	19	123	−55.6	----	16	131	−64.7	----
16,000	----	----	----	----	14	109	−62.7	----	14	108	−61.5	----	10	106	−59.1	----	16	108	−62.1	----	14	105	−56.0	----	12	112	−67.2	----
17,000	----	----	----	----	13	93	−64.3	----	7	92	−61.5	----	9	90	−58.6	----	14	92	−63.4	----	8	90	−56.1	----	9	95	−68.9	----
18,000	----	----	----	----	10	79	−65.4	----	5	78	−62.8	----	----	----	----	----	13	78	−62.5	----	6	76	−55.6	----	7	80	−68.3	----
19,000	----	----	----	----	7	67	−65.5	----	----	----	----	----	----	----	----	----	6	67	−61.3	----	----	----	----	----	5	69	−67.1	----

Altitude (meters) m. s. l.	San Diego, Calif.[1] (19 m.)				San Juan P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies[3] (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,010	17.4	[2] 74	31	1,015	24.5	[2] 85	19	1,006	11.8	84	31	988	6.9	80	30	1,017	12.6	[2] 69	31	946	11.8	[2] 63	----	----	----	----
500	30	954	15.0	[2] 63	31	961	21.4	[2] 84	19	958	12.6	78	31	956	8.7	76	30	960	9.0	[2] 67	----	----	----	----	----	----	----	----
1,000	30	900	15.7	[2] 46	31	907	18.4	[2] 81	19	902	16.0	51	31	900	7.5	71	30	904	5.2	[2] 71	31	901	10.3	[2] 53	----	----	----	----
1,500	30	849	15.2	[2] 26	31	856	15.8	[2] 72	19	851	14.7	41	31	846	4.7	70	30	850	1.8	[2] 74	31	848	6.4	[2] 56	----	----	----	----
2,000	30	799	13.2	[2] 20	31	806	13.7	[2] 56	19	801	11.8	37	31	796	2.0	69	30	798	−1.6	[2] 70	31	797	2.4	[2] 60	----	----	----	----
2,500	30	753	10.6	[2] 18	31	760	11.4	[2] 48	19	754	8.6	34	31	748	−0.5	68	30	749	−4.5	[2] 69	31	749	−1.5	[2] 66	----	----	----	----
3,000	30	709	7.6	[2] 18	31	715	9.0	[2] 42	18	710	6.3	33	31	702	−3.4	67	30	703	−7.1	[2] 63	30	703	−5.2	[2] 66	----	----	----	----
4,000	30	627	1.5	[2] 16	28	634	3.9	[2] 42	18	628	1.9	31	30	618	−9.4	61	30	618	−13.0	[2] 58	30	618	−11.7	[2] 58	----	----	----	----
5,000	30	553	−5.3	[2] 21	27	560	−1.9	[2] 38	18	554	−3.6	28	27	543	−14.7	57	30	541	−19.3	[2] 61	29	542	−17.7	[2] 50	----	----	----	----
6,000	30	486	−12.0	----	27	493	−7.9	[2] 36	17	488	−9.9	28	25	474	−21.3	56	29	472	−25.6	[2] 69	29	473	−24.7	[2] 52	----	----	----	----
7,000	30	426	−19.5	----	26	433	−14.5	[2] 40	17	428	−17.3	28	25	413	−28.2	56	28	411	−31.6	[2] 71	28	412	−31.8	----	----	----	----	----
8,000	15	372	−27.1	----	24	379	−21.0	[2] 44	17	374	−25.0	28	23	359	−35.3	----	25	356	−38.7	----	28	356	−39.0	----	----	----	----	----
9,000	15	322	−34.9	----	24	330	−28.2	[2] 47	17	324	−32.8	30	20	309	−42.1	----	24	307	−45.0	----	27	307	−45.1	----	----	----	----	----
10,000	15	279	−42.3	----	24	287	−35.9	----	16	282	−40.4	----	19	266	−47.9	----	22	264	−50.3	----	25	264	−49.4	----	----	----	----	----
11,000	14	241	−49.2	----	22	248	−44.0	----	16	242	−48.2	----	19	229	−51.5	----	15	226	−53.0	----	23	227	−52.2	----	----	----	----	----
12,000	14	206	−56.0	----	21	213	−52.1	----	14	208	−54.8	----	15	196	−52.4	----	13	194	−54.5	----	20	194	−54.3	----	----	----	----	----
13,000	14	176	−60.3	----	21	182	−59.9	----	13	177	−59.3	----	12	168	−53.1	----	10	165	−54.8	----	18	167	−53.6	----	----	----	----	----
14,000	10	150	−62.5	----	21	155	−66.0	----	13	151	−61.7	----	11	144	−54.0	----	6	141	−54.9	----	13	142	−52.6	----	----	----	----	----
15,000	7	128	−62.5	----	21	131	−70.3	----	11	128	−62.2	----	9	124	−55.2	----	----	----	----	----	9	122	−53.2	----	----	----	----	----
16,000	5	109	−64.3	----	18	111	−73.3	----	10	110	−63.5	----	8	106	−55.8	----	----	----	----	----	5	105	−55.1	----	----	----	----	----
17,000	----	----	----	----	16	93	−73.4	----	8	93	−64.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	11	78	−71.3	----	8	79	−64.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
19,000	----	----	----	----	7	67	−68.5	----	7	67	−63.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	5	57	−62.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during May 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Tacubaya, Mexico (2,306 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	27	774	17.8	55	30	999	25.3	87	31	1,017	9.3	[2] 90	24	1,019	11.7	[2] 75	31	1,015	18.2	[2] 72
500					30	956	24.4	85	31	960	6.2	[2] 81	24	962	7.6	[2] 80	31	960	17.3	[2] 63
1,000					30	904	21.4	85	31	904	3.7	[2] 75	24	905	4.9	[2] 73	31	905	14.9	[2] 62
1,500					30	853	18.8	82	31	850	1.0	[2] 70	24	852	2.5	[2] 62	31	853	11.7	[2] 64
2,000					29	804	16.1	81	31	798	−1.4	[2] 60	24	800	1.2	[2] 50	31	803	8.9	[2] 64
2,500	27	757	16.4	56	29	758	13.5	81	31	749	−4.2	[2] 53	24	751	−2.3	[2] 42	31	756	6.4	[2] 61
3,000	27	713	12.6	60	27	714	10.7	84	30	703	−7.0	[2] 46	24	705	−5.0	[2] 38	31	711	3.9	[2] 57
4,000	27	632	5.5	70	27	633	4.9	87	29	618	−12.7	[2] 38	24	620	−10.8	[2] 41	31	628	−1.7	[2] 47
5,000	25	559	−1.1	80	26	560	−0.7	77	29	542	−19.0	[2] 41	24	544	−16.6	[2] 46	31	554	−7.4	[2] 47
6,000	25	493	−6.6	79	25	493	−5.9	70	29	473	−25.6	[2] 47	24	476	−23.1	[2] 49	31	486	−13.4	[2] 47
7,000	24	433	−12.4	68	24	434	−12.1	61	29	411	−32.1	[2] 51	23	414	−30.8	[2] 56	31	426	−20.1	[2] 41
8,000	24	379	−19.4	54	23	380	−18.9	50	28	356	−38.7	----	18	357	−38.3	----	30	371	−27.4	[2] 48
9,000	21	330	−26.3	53	23	331	−26.1	42	26	307	−44.5	----	17	309	−44.5	----	30	322	−34.6	----
10,000	19	287	−33.9	----	22	288	−33.2	46	24	265	−49.3	----	14	266	−48.2	----	30	279	−42.1	----
11,000	15	248	−42.0	----	22	250	−41.3	----	23	227	−53.5	----	13	230	−51.4	----	30	240	−49.5	----
12,000	12	213	−50.0	----	21	214	−49.6	----	20	193	−55.8	----	12	195	−55.9	----	29	205	−56.1	----
13,000	11	183	−56.8	----	20	184	−58.5	----	18	165	−55.5	----	10	168	−57.5	----	28	175	−59.9	----
14,000	10	156	−65.3	----	20	156	−67.2	----	16	141	−54.9	----	7	143	−56.4	----	26	149	−61.2	----
15,000	9	132	----	----	20	132	−75.3	----	14	120	−55.4	----	6	123	−56.4	----	20	127	−62.0	----
16,000	7	112	----	----	17	111	−83.0	----	7	103	−54.5	----	----	----	----	----	15	109	−62.5	----
17,000	----	----	----	----	14	92	−83.7	----	----	----	----	----	----	----	----	----	14	93	−63.5	----
18,000	----	----	----	----	10	78	−81.0	----	----	----	----	----	----	----	----	----	10	79	−63.9	----
19,000	----	----	----	----	6	65	−76.0	----	----	----	----	----	----	----	----	----	5	68	−64.0	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1, 620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,004	18.8	[2] 83	30	836	23.9	[2] 28	30	1,017	26.1	[2] 84	27	983	24.6	77	30	954	16.1	77	30	913	17.2	[2] 52	30	1,013	26.6	[2] 83
500	30	957	19.9	[2] 71	----	----	----	----	30	961	24.4	[2] 75	27	961	26.0	66	----	----	----	----	----	----	----	----	30	958	23.6	[2] 80
1,000	30	903	17.4	[2] 70	----	----	----	----	30	908	21.8	[2] 65	27	908	23.8	67	30	900	16.0	65	30	899	17.8	[2] 45	30	905	21.8	[2] 62
1,500	30	852	14.2	[2] 69	----	----	----	----	30	857	18.8	[2] 63	27	857	20.3	71	30	849	13.2	68	30	848	15.2	[2] 41	30	854	19.4	[2] 52
2,000	30	802	11.4	[2] 65	30	801	23.1	[2] 25	30	808	15.7	[2] 65	27	808	16.8	72	29	799	10.1	67	30	799	11.1	[2] 45	30	805	16.7	[2] 45
2,500	30	755	8.7	[2] 59	30	755	19.6	[2] 28	30	762	12.6	[2] 63	27	762	13.5	67	29	752	7.7	61	30	752	7.2	[2] 50	30	759	14.3	[2] 39
3,000	30	711	6.4	[2] 53	30	713	15.7	[2] 30	30	718	9.8	[2] 60	27	718	10.4	62	29	708	5.0	59	30	707	3.7	[2] 53	30	715	11.3	[2] 36
4,000	30	629	1.2	[2] 48	30	632	7.4	[2] 39	30	636	4.7	[2] 53	27	636	4.2	59	29	625	−1.2	55	29	624	−3.6	[2] 53	30	634	5.3	[2] 36
5,000	29	554	−5.0	[2] 50	30	559	−0.7	[2] 50	29	562	−1.1	[2] 46	27	562	−1.7	55	29	551	−7.9	48	29	550	−10.2	[2] 53	30	560	−0.7	[2] 35
6,000	29	487	−10.6	[2] 48	30	493	−8.3	[2] 55	29	495	−6.8	[2] 39	27	495	−7.7	49	28	485	−14.4	41	29	482	−17.3	[2] 49	30	494	−6.9	[2] 36
7,000	29	428	−16.8	[2] 48	30	432	−14.8	[2] 49	29	435	−13.0	[2] 42	27	435	−14.2	44	28	424	−21.6	37	28	421	−24.4	[2] 54	30	434	−13.5	[2] 41
8,000	29	373	−23.6	[2] 47	30	378	−21.4	[2] 38	29	380	−19.8	[2] 41	27	380	−21.1	42	28	369	−28.8	36	27	366	−31.8	[2] 54	30	379	−20.4	[2] 44
9,000	29	324	−30.9	[2] 55	30	329	−28.7	----	29	331	−27.1	----	26	331	−28.2	40	28	320	−35.8	36	25	316	−30.3	----	30	330	−27.7	[2] 49
10,000	29	282	−38.3	----	30	286	−36.7	----	29	288	−34.7	----	25	288	−36.0	41	28	277	−42.7	----	25	273	−44.5	----	29	287	−35.5	----
11,000	29	243	−46.0	----	30	247	−43.9	----	29	249	−42.2	----	25	249	−43.6	----	27	239	−48.7	----	24	235	−48.1	----	28	248	−43.1	----
12,000	29	208	−52.2	----	30	212	−49.7	----	29	215	−49.7	----	24	214	−50.9	----	25	204	−52.8	----	22	202	−49.5	----	28	213	−50.4	----
13,000	29	178	−57.1	----	28	182	−55.2	----	29	184	−56.8	----	23	183	−58.0	----	22	176	−54.1	----	14	173	−50.1	----	28	183	−57.6	----
14,000	28	152	−59.9	----	28	155	−59.9	----	27	157	−62.4	----	22	156	−62.6	----	20	150	−54.9	----	10	150	−51.4	----	26	155	−64.1	----
15,000	22	130	−61.7	----	26	132	−64.4	----	24	133	−65.8	----	21	132	−66.1	----	19	128	−56.4	----	9	128	−52.1	----	24	132	−69.2	----
16,000	18	111	−62.2	----	25	112	−66.5	----	22	113	−67.5	----	19	112	−68.0	----	17	110	−57.5	----	7	110	−52.3	----	20	111	−72.7	----
17,000	16	94	−61.6	----	22	95	−67.2	----	18	95	−67.7	----	16	96	−68.4	----	13	94	−57.4	----	5	94	−53.7	----	14	94	−74.4	----
18,000	10	80	−60.0	----	18	81	−65.3	----	13	80	−66.2	----	9	81	−67.6	----	9	80	−57.0	----	----	----	----	----	8	79	−70.6	----
19,000	----	----	----	----	8	69	−62.8	----	6	68	−63.8	----	----	----	----	----	6	69	−56.3	----	----	----	----	----	7	67	−66.2	----

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	989	18.6	[2] 80	30	989	12.4	[2] 80	30	1,016	24.4	93	30	837	17.5	[2] 58	30	990	19.8	[2] 81	30	879	26.8	[2] 34	30	807	13.8	40
500	30	958	19.8	[2] 66	30	953	13.6	[2] 67	30	962	24.5	80	----	----	----	----	30	959	20.4	[2] 67	----	----	----	----	----	----	----	----
1,000	30	904	18.0	[2] 61	30	899	11.5	[2] 64	30	908	21.8	69	----	----	----	----	30	904	18.2	[2] 66	----	----	----	----	----	----	----	----
1,500	30	852	15.0	[2] 60	30	846	8.5	[2] 68	30	858	18.9	68	----	----	----	----	30	853	15.5	[2] 60	30	849	26.5	[2] 32	----	----	----	----
2,000	30	803	12.1	[2] 57	30	796	6.0	[2] 65	30	808	16.0	65	30	800	16.9	[2] 50	30	804	13.4	[2] 53	30	802	23.2	[2] 34	30	799	14.1	41
2,500	30	756	9.9	[2] 51	30	748	3.6	[2] 57	30	762	13.2	63	30	754	13.8	[2] 50	30	757	10.6	[2] 52	30	757	19.6	[2] 37	30	753	11.8	41
3,000	30	712	7.2	[2] 45	30	704	1.2	[2] 54	30	718	10.3	60	30	711	10.2	[2] 52	30	713	7.9	[2] 49	30	714	15.8	[2] 41	30	708	7.9	40
4,000	30	630	1.3	[2] 42	29	621	−3.8	[2] 44	30	636	4.1	58	30	629	3.4	[2] 54	29	631	1.7	[2] 46	30	633	7.5	[2] 53	30	627	−0.5	43
5,000	30	555	−4.7	[2] 41	29	546	−9.8	[2] 42	29	562	−1.7	56	30	556	−4.1	[2] 59	29	557	−4.4	[2] 44	30	560	0.0	[2] 55	29	552	−8.5	46
6,000	30	489	−10.5	[2] 38	29	479	−16.1	[2] 40	27	495	−7.1	50	30	489	−11.7	[2] 60	29	490	−10.7	[2] 42	30	494	−6.5	[2] 47	29	484	−15.7	45
7,000	30	428	−16.7	[2] 36	29	419	−22.3	[2] 40	27	435	−13.6	43	30	428	−18.6	[2] 51	29	429	−17.1	[2] 44	30	435	−12.9	[2] 35	29	424	−22.2	43
8,000	30	374	−23.5	[2] 36	29	365	−29.5	[2] 40	26	380	−20.7	41	30	374	−25.9	----	29	374	−23.8	[2] 46	30	380	−19.8	[2] 30	29	369	−29.5	41
9,000	30	325	−30.9	----	28	316	−36.6	----	26	331	−27.7	39	29	324	−33.4	----	29	326	−31.2	----	30	331	−27.4	----	28	320	−36.5	29
10,000	30	282	−38.7	----	28	273	−43.1	----	26	288	−35.2	30	27	281	−40.6	----	28	283	−38.2	----	30	288	−35.0	----	24	276	−42.4	----
11,000	30	243	−46.0	----	27	235	−47.8	----	24	249	−42.6	----	26	242	−46.9	----	28	244	−45.2	----	29	249	−42.6	----	24	238	−47.4	----
12,000	30	209	−52.3	----	26	202	−51.3	----	23	214	−50.2	----	23	209	−52.6	----	28	210	−51.5	----	29	214	−49.3	----	21	204	−51.1	----
13,000	30	179	−57.3	----	25	173	−54.4	----	21	184	−57.3	----	23	178	−56.9	----	28	180	−56.9	----	28	184	−55.6	----	19	175	−54.6	----
14,000	29	152	−60.9	----	23	148	−55.6	----	20	156	−63.5	----	18	152	−60.2	----	28	153	−59.7	----	27	156	−61.5	----	17	149	−56.4	----
15,000	29	130	−62.8	----	21	126	−56.4	----	16	133	−67.6	----	12	130	−63.8	----	25	130	−62.0	----	27	133	−66.5	----	11	127	−58.2	----
16,000	27	110	−63.5	----	19	109	−56.0	----	12	112	−70.5	----	12	110	−65.1	----	23	111	−63.1	----	24	113	−69.9	----	10	108	−59.9	----
17,000	19	94	−62.8	----	14	93	−56.7	----	11	95	−69.9	----	8	94	−63.9	----	19	94	−62.4	----	18	95	−69.1	----	9	93	−61.7	----
18,000	15	80	−60.7	----	8	79	−55.2	----	7	80	−68.0	----	----	----	----	----	15	80	−59.9	----	11	80	−66.3	----	6	78	−61.6	----
19,000	7	68	−59.9	----	----	----	----	----	----	----	----	----	----	----	----	----	7	69	−57.6	----	5	69	−63.3	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1943—Continued

STATIONS ANE ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Glasgow, Mont. (639 m.)				Great Falls, Mont. (1,128 m.)				Huntington, West Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	25	939	17.0	[2]63	30	886	12.8	[2]68	30	997	21.5	[2]91	30	973	15.0	[2]79	30	994	19.9	[2]85	30	1,016	25.7	[2]87	28	1,010	22.0	[2]82
500									30	960	22.8	[2]70	30	955	15.2	[2]73	30	959	21.0	[2]72	30	960	23.8	[2]74	28	959	21.5	[2]66
1,000	25	900	16.5	[2]53					30	907	20.4	[2]64	30	900	13.6	[2]67	30	905	19.1	[2]67	30	906	21.3	[2]69	28	905	18.7	[2]64
1,500	25	849	13.2	[2]55	30	848	11.5	[2]60	30	856	17.2	[2]64	30	848	10.7	[2]67	30	853	16.3	[2]64	30	855	18.3	[2]63	28	854	15.8	[2]66
2,000	25	799	9.8	[2]60	29	798	8.7	[2]58	30	806	14.3	[2]59	30	798	8.1	[2]62	30	804	13.8	[2]56	30	807	15.6	[2]55	28	804	13.0	[2]61
2,500	25	752	6.2	[2]66	29	751	5.3	[2]61	30	760	11.8	[2]50	30	751	5.5	[2]57	30	758	11.2	[2]50	30	760	13.0	[2]50	28	757	10.4	[2]52
3,000	25	708	3.1	[2]66	29	706	1.9	[2]62	30	716	9.0	[2]46	30	706	2.8	[2]53	30	714	8.6	[2]46	30	716	10.2	[2]48	28	713	7.7	[2]46
4,000	25	625	−3.0	[2]60	29	623	−4.5	[2]63	30	633	3.1	[2]46	30	624	−2.6	[2]47	30	631	2.4	[2]43	30	635	4.8	[2]40	28	631	1.8	[2]37
5,000	25	550	−9.1	[2]61	29	548	−11.0	[2]63	30	559	−2.6	[2]44	29	550	−9.1	[2]42	28	558	−3.2	[2]40	30	561	−1.0	[2]40	28	557	−3.4	[2]33
6,000	25	483	−15.3	[2]53	29	481	−17.8	[2]59	30	492	−8.4	[2]43	29	482	−16.0	[2]37	28	491	−9.2	[2]39	30	494	−7.2	[2]41	28	490	−9.5	[2]37
7,000	25	422	−22.1	[2]54	28	420	−24.5	[2]61	30	433	−14.8	[2]45	28	421	−23.3	[2]36	28	431	−15.8	[2]46	30	434	−13.5	[2]45	28	430	−15.7	----
8,000	24	367	−30.2	[2]56	28	365	−32.2	----	30	378	−21.4	[2]43	28	366	−30.2	----	28	376	−22.8	[2]50	30	380	−20.2	[2]44	28	376	−22.3	----
9,000	24	318	−37.9	[2]56	25	316	−39.7	----	30	329	−29.0	[2]49	28	317	−37.2	----	28	327	−30.1	[2]60	30	331	−27.4	[2]47	28	327	−29.6	----
10,000	22	275	−45.4	----	23	273	−46.9	----	30	286	−36.9	----	28	275	−43.8	----	28	284	−37.4	----	29	288	−35.0	----	28	284	−37.0	----
11,000	22	236	−51.0	----	18	234	−53.6	----	30	246	−44.6	----	28	236	−48.5	----	27	246	−44.3	----	29	249	−42.8	----	27	245	−44.7	----
12,000	20	202	−52.7	----	17	199	−54.2	----	29	212	−52.4	----	23	203	−51.8	----	25	210	−52.0	----	29	214	−50.6	----	25	211	−51.9	----
13,000	20	173	−52.3	----	15	171	−52.3	----	29	181	−59.3	----	19	174	−54.3	----	24	180	−57.5	----	29	183	−58.0	----	24	180	−58.4	----
14,000	18	148	−53.0	----	14	146	−51.5	----	28	154	−63.8	----	18	149	−55.1	----	20	153	−61.0	----	27	156	−64.2	----	21	153	−62.6	----
15,000	16	127	−54.3	----	11	125	−52.7	----	25	131	−66.2	----	15	127	−56.8	----	19	130	−63.6	----	25	132	−68.5	----	20	130	−64.6	----
16,000	13	109	−54.5	----	9	107	−53.5	----	22	111	−68.8	----	11	108	−55.7	----	15	111	−65.8	----	21	112	−71.6	----	15	111	−65.6	----
17,000	8	93	−54.4	----	5	92	−54.9	----	14	94	−67.8	----	8	92	−54.5	----	11	94	−64.9	----	11	94	−72.5	----	11	94	−63.4	----
18,000									10	79	−65.4	----	5	79	−53.4	----	8	80	−63.5	----	7	79	−67.1	----	8	80	−61.8	----
19,000																	6	68	−61.0	----								

Altitude (meters) m. s. l.	Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,002	27.2	79	30	968	17.4	57	26	1,018	25.0	84	30	996	24.8	[2]75	18	1,018	24.2	[2]80	30	1,014	15.4	[2]73	30	968	24.2	[2]74
500	28	956	25.0	77	30	958	16.8	57	26	962	22.9	86	30	960	25.3	[2]63	18	962	21.7	[2]78	30	956	13.9	[2]63	30	956	24.8	[2]62
1,000	28	903	23.3	65	30	903	14.0	56	26	909	20.0	82	30	907	22.4	[2]61	18	908	19.2	[2]79	30	902	14.7	[2]42	30	903	23.7	[2]61
1,500	28	853	20.7	67	30	850	10.3	60	26	857	17.1	76	30	856	19.0	[2]62	18	857	17.2	[2]73	30	850	12.5	[2]31	30	853	21.2	[2]58
2,000	28	804	17.7	68	30	800	6.7	67	26	808	14.1	76	30	807	16.1	[2]57	18	807	14.5	[2]66	30	800	9.9	[2]24	30	805	18.5	[2]51
2,500	28	759	14.8	68	30	753	3.5	71	26	762	11.0	70	30	761	13.5	[2]52	18	761	11.9	[2]58	30	753	7.2	[2]22	30	759	16.1	[2]43
3,000	28	715	11.7	69	30	708	0.5	68	26	717	8.4	62	30	717	10.4	[2]49	18	717	8.7	[2]54	30	708	4.1	[2]19	30	716	13.0	[2]47
4,000	28	634	5.8	74	30	624	−5.7	64	25	635	3.2	59	30	635	3.9	[2]48	18	634	2.6	[2]56	30	626	−1.7	[2]17	30	635	6.6	[2]46
5,000	25	561	0.0	80	29	548	−12.5	57	25	561	−2.3	51	30	561	−2.0	[2]43	18	560	−3.2	[2]48	30	551	−8.0	[2]21	29	561	−0.2	[2]41
6,000	25	494	−5.7	74	27	480	−18.8	53	25	494	−8.4	51	29	494	−7.6	[2]39	18	493	−9.2	[2]38	30	483	−14.7	[2]25	29	494	−6.6	[2]37
7,000	23	434	−11.6	66	26	420	−25.3	50	25	433	−14.6	49	29	434	−14.0	[2]40	16	433	−15.1	[2]32	30	423	−21.7	----	29	435	−12.8	[2]30
8,000	20	380	−18.2	62	26	365	−32.5	49	25	379	−21.4	48	29	379	−20.6	[2]37					30	368	−29.0	----	28	381	−19.7	[2]29
9,000	19	332	−25.2	58	24	315	−39.6	41	25	330	−28.3	45	28	330	−28.0	[2]32					30	319	−36.3	----	28	331	−27.0	[2]36
10,000	19	289	−32.5	62	23	272	−44.8	----	24	286	−35.7	41	28	287	−35.5	----					29	276	−43.5	----	28	288	−34.3	----
11,000	19	250	−40.4	----	22	235	−49.2	----	22	247	−42.9	----	28	248	−43.2	----					27	238	−49.1	----	27	249	−41.4	----
12,000	17	216	−48.4	----	22	201	−51.4	----	21	213	−50.4	----	28	214	−50.6	----					24	204	−52.0	----	27	215	−48.4	----
13,000	14	185	−56.6	----	20	173	−52.8	----	19	182	−57.3	----	27	183	−57.8	----					19	175	−53.9	----	27	184	−55.1	----
14,000	14	157	−64.7	----	16	148	−54.4	----	17	155	−62.7	----	27	155	−63.6	----					17	149	−55.9	----	26	157	−60.9	----
15,000	13	133	−72.1	----	16	126	−54.9	----	16	132	−66.0	----	27	132	−66.6	----					13	128	−58.3	----	26	134	−65.6	----
16,000	11	112	−77.2	----	14	109	−55.7	----	14	112	−69.9	----	23	112	−69.5	----					9	109	−60.5	----	23	113	−68.9	----
17,000	7	94	−76.8	----	10	93	−56.0	----	12	94	−72.2	----	19	94	−69.1	----					6	93	−60.0	----	16	96	−69.4	----
18,000					9	79	−56.3	----	12	80	−71.2	----	16	80	−67.5	----									8	81	−69.1	----
19,000									8	68	−68.1	----	10	68	−64.1	----									6	69	−66.2	----

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	979	21.8	[2]78	21	1,016	27.0	[2]80	30	968	29.3	[2]23	30	971	21.4	[2]73	30	1,011	15.1	84	30	996	23.4	[2]81	30	986	20.6	[2]74
500	30	957	21.8	[2]72	21	963	24.5	[2]75	30	951	31.2	[2]19	30	959	22.2	[2]66	30	986	16.6	70	30	959	23.5	[2]69	30	956	20.6	[2]67
1,000	30	903	19.9	[2]67	21	909	21.7	[2]72	30	899	29.0	[2]18	30	906	20.4	[2]63	30	901	15.1	67	30	906	20.4	[2]68	30	902	17.7	[2]66
1,500	30	852	17.6	[2]63	21	858	18.6	[2]69	30	849	24.8	[2]20	30	855	17.7	[2]63	30	850	12.4	70	30	855	17.7	[2]60	30	851	14.6	[2]66
2,000	30	803	15.4	[2]59	21	809	15.5	[2]69	30	802	20.5	[2]23	30	806	14.2	[2]58	30	800	9.7	70	30	806	15.3	[2]52	30	801	11.7	[2]54
2,500	30	757	12.9	[2]55	21	762	12.7	[2]66	30	756	16.4	[2]25	30	759	11.2	[2]47	30	753	7.4	65	30	759	13.0	[2]49	30	754	9.3	[2]47
3,000	30	713	10.1	[2]52	21	719	9.7	[2]62	30	712	12.5	[2]30	30	715	9.4	[2]39	30	708	4.9	59	30	715	10.4	[2]48	30	710	6.8	[2]44
4,000	30	632	4.1	[2]47	21	636	3.9	[2]54	30	632	5.4	[2]33	30	633	3.7	[2]31	29	626	−0.5	50	30	634	4.4	[2]46	29	628	0.5	[2]47
5,000	30	558	−2.3	[2]42	19	562	−1.9	[2]43	29	558	−1.3	[2]35	30	559	−2.2	[2]34	29	552	−6.6	46	29	560	−1.9	[2]49	28	554	−6.1	[2]47
6,000	30	491	−8.6	[2]34	18	495	−7.9	[2]44	29	491	−8.0	[2]32	30	492	−8.0	[2]40	28	485	−12.8	43	29	493	−7.7	[2]40	28	487	−12.4	[2]40
7,000	30	432	−15.0	[2]33	18	435	−14.2	[2]46	29	432	−14.6	[2]32	30	432	−14.1	[2]39	28	425	−19.0	44	29	433	−14.1	[2]40	28	426	−19.1	----
8,000	30	377	−22.6	[2]43	16	380	−21.2	----	29	377	−22.2	[2]32	29	378	−20.9	[2]42	28	370	−25.8	45	29	379	−20.7	[2]42	28	372	−26.0	----
9,000	30	328	−29.8	[2]54	15	331	−28.5	----	29	328	−30.1	[2]33	29	329	−28.1	[2]39	28	322	−33.0	44	29	330	−28.1	[2]43	27	323	−33.2	----
10,000	29	285	−36.7	----	14	287	−35.7	----	29	285	−37.7	----	29	286	−35.9	----	28	279	−40.2	----	29	287	−36.0	----	27	280	−40.3	----
11,000	28	246	−43.4	----	14	249	−43.2	----	29	246	−44.5	----	29	247	−43.9	----	27	240	−47.0	----	28	248	−44.0	----	26	242	−46.2	----
12,000	26	212	−49.7	----	12	213	−52.1	----	29	211	−50.4	----	29	212	−51.4	----	27	206	−52.5	----	28	213	−51.3	----	24	208	−51.4	----
13,000	23	182	−55.1	----	10	182	−59.1	----	29	181	−55.3	----	29	182	−57.9	----	27	176	−57.2	----	28	182	−57.8	----	23	178	−54.9	----
14,000	15	156	−59.4	----	7	155	−64.0	----	27	154	−59.9	----	29	155	−61.5	----	24	150	−60.4	----	25	155	−62.2	----	23	152	−57.3	----
15,000	12	133	−62.9	----	7	132	−68.1	----	26	131	−63.4	----	28	132	−63.9	----	23	128	−61.3	----	24	132	−65.6	----	22	129	−59.7	----
16,000	11	113	−65.3	----					22	112	−65.7	----	25	112	−63.5	----	21	110	−61.9	----	18	112	−67.6	----	20	110	−60.6	----
17,000	10	96	−65.1	----					22	95	−66.3	----	20	95	−64.2	----	12	93	−61.4	----	12	96	−66.2	----	15	94	−60.1	----
18,000	9	81	−62.2	----					19	80	−64.4	----	15	81	−59.6	----	10	79	−59.9	----	5	80	−66.3	----	7	79	−58.5	----
19,000	5	69	−60.0	----					16	68	−62.1	----	12	69	−61.7	----												
20,000									7	58	−59.3	----	7	58	−59.9	----												

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

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Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	987	25.7	[2]77	30	1,010	17.5	[2]78	30	1,016	25.3	[2]85	30	1,006	13.3	[2]80	30	988	12.6	[2]89	28	1,014	17.6	[2]61	30	944	15.7	[2]60
500	30	959	24.9	[2]77	30	955	16.6	[2]56	30	961	22.4	[2]82	30	957	14.2	[2]55	30	956	15.1	[2]74	28	958	14.3	[2]58				
1,000	30	905	22.4	[2]74	30	900	17.2	[2]32	30	908	19.6	[2]77	30	902	16.1	[2]43	30	901	14.6	[2]64	28	903	11.2	[2]57	30	901	14.6	[2]54
1,500	30	855	20.2	[2]63	30	849	16.5	[2]19	30	857	17.0	[2]70	30	851	14.9	[2]34	30	849	12.2	[2]64	28	850	7.8	[2]61	30	849	10.9	[2]56
2,000	30	806	17.5	[2]56	30	800	14.5	[2]16	30	807	14.9	[2]59	30	801	12.2	[2]31	30	800	9.4	[2]61	28	799	4.3	[2]66	30	799	7.0	[2]62
2,500	30	760	15.0	[2]44	30	754	12.1	[2]19	30	761	12.7	[2]51	30	755	9.5	[2]30	30	753	6.6	[2]60	28	752	0.9	[2]68	30	751	3.2	[2]67
3,000	30	716	12.2	[2]40	30	710	9.2	[2]22	30	716	10.4	[2]42	30	710	7.0	[2]34	30	708	3.8	[2]60	28	706	−2.3	[2]64	29	706	−0.3	[2]68
4,000	30	635	6.3	[2]38	30	628	2.6	[2]26	30	635	4.6	[2]43	30	628	1.5	[2]30	28	626	−1.8	[2]56	28	621	−8.0	[2]57	29	622	−7.1	[2]51
5,000	30	562	0.2	[2]41	30	555	−3.9	[2]29	30	561	−1.6	[2]46	30	554	−4.1	[2]30	27	552	−7.4	[2]50	27	546	−14.6	[2]58	27	547	−13.3	[2]46
6,000	30	495	−6.0	[2]34	29	488	−10.2	----	30	494	−7.5	[2]47	30	487	−10.6	[2]30	26	484	−13.7	[2]43	27	477	−22.2	----	27	479	−19.8	[2]47
7,000	30	435	−12.2	[2]37	29	428	−17.2	----	30	434	−14.0	[2]50	28	428	−17.6	[2]33	25	424	−20.7	[2]39	27	416	−29.8	----	26	417	−27.2	[2]50
8,000	30	381	−19.1	[2]37	20	373	−24.8	----	30	380	−20.8	[2]54	27	374	−24.9	[2]26	25	369	−27.7	[2]38	25	360	−37.0	----	26	362	−34.9	----
9,000	29	332	−26.3	[2]40	20	324	−32.4	----	29	331	−28.2	[2]60	27	324	−32.5	----	25	320	−34.7	[2]48	25	311	−43.5	----	25	313	−42.1	----
10,000	28	280	−33.8	----	18	281	−39.4	----	29	287	−36.1	----	24	281	−40.0	----	25	278	−41.2	----	25	267	−48.7	----	24	270	−47.8	----
11,000	28	230	−41.5	----	17	242	−46.2	----	29	248	−44.1	----	24	242	−46.4	----	24	239	−46.9	----	23	230	−51.2	----	23	231	−51.0	----
12,000	27	215	−49.1	----	17	208	−52.7	----	29	213	−52.1	----	22	208	−51.9	----	23	206	−51.4	----	20	198	−51.8	----	20	198	−48.8	----
13,000	24	184	−56.4	----	16	178	−57.2	----	29	182	−59.5	----	21	178	−55.4	----	21	176	−55.6	----	20	169	−51.8	----	19	170	−48.1	----
14,000	21	157	−62.8	----	14	153	−60.2	----	29	155	−65.4	----	20	152	−58.5	----	20	151	−57.8	----	18	146	−52.6	----	15	146	−49.4	----
15,000	18	134	−66.1	----	9	130	−61.8	----	26	132	−69.1	----	19	129	−60.6	----	20	129	−59.6	----	14	125	−53.0	----	13	126	−50.8	----
16,000	14	113	−68.8	----	6	110	−63.5	----	25	111	−70.5	----	18	110	−61.3	----	18	110	−60.2	----	12	107	−53.4	----	9	108	−52.8	----
17,000	10	96	−69.2	----					22	94	−69.9	----	15	94	−60.9	----	13	94	−61.2	----	6	92	−54.0	----	5	93	−54.0	----
18,000									14	79	−68.0	----	13	80	−60.8	----	11	80	−59.5	----								
19,000									10	68	−65.7	----	10	69	−58.9	----												
20,000									6	58	−62.7	----	5	58	−58.1	----												

Altitude (meters) m. s. l.	Swan Islands, West Indies (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,013	26.6	82	27	775	14.8	76	30	1,018	25.3	[2]85	30	1,000	24.4	90	30	1,014	11.7	[2]88	17	1,015	15.0	[2]77	30	1,013	24.4	[2]78
500	30	959	22.3	87	----	----	----	----	30	962	23.5	[2]75	30	957	23.7	86	30	959	10.6	[2]74	17	959	12.1	[2]73	30	960	23.8	[2]66
1,000	30	905	18.7	87	----	----	----	----	30	908	20.7	[2]73	29	904	21.4	84	30	903	9.5	[2]57	17	904	9.5	[2]65	30	907	20.9	[2]67
1,500	30	854	15.9	81	----	----	----	----	30	857	17.7	[2]72	30	853	18.8	82	30	850	7.2	[2]49	17	850	6.6	[2]65	30	855	18.0	[2]67
2,000	30	805	13.5	72	----	----	----	----	30	808	14.8	[2]69	30	804	16.2	82	30	799	4.3	[2]48	17	800	3.3	[2]61	30	806	15.0	[2]63
2,500	30	758	11.0	64	27	757	13.5	76	30	762	12.2	[2]65	30	758	13.7	82	30	751	1.3	[2]48	17	752	0.4	[2]52	30	760	12.2	[2]56
3,000	30	714	8.3	59	27	713	10.4	76	30	718	9.7	[2]60	30	715	10.8	85	30	706	−1.9	[2]48	17	706	−2.4	[2]46	30	716	9.6	[2]50
4,000	28	632	2.7	55	27	632	4.0	82	30	636	4.4	[2]53	28	634	4.9	87	30	622	−7.5	[2]41	17	622	−8.6	[2]45	30	634	4.0	[2]46
5,000	28	558	−3.0	54	26	558	−1.6	88	29	562	−1.1	[2]53	25	560	−0.5	82	30	546	−14.0	[2]38	17	546	−15.2	[2]41	30	560	−1.6	[2]41
6,000	27	492	−8.7	55	26	492	−6.6	82	29	495	−7.2	[2]52	24	494	−6.4	76	30	478	−21.1	[2]44	17	477	−22.4	[2]47	30	494	−7.5	[2]36
7,000	27	432	−14.8	57	22	433	−12.1	75	28	435	−13.3	[2]47	23	434	−12.3	72	30	417	−28.6	[2]48	17	416	−30.2	[2]62	30	434	−13.4	[2]34
8,000	26	377	−21.2	59	22	378	−18.7	72	28	380	−20.0	[2]49	23	380	−18.8	73	30	361	−36.0	----	15	361	−36.1	----	30	379	−20.3	----
9,000	24	328	−28.2	58	21	330	−25.4	67	28	331	−27.2	[2]52	21	331	−25.5	69	30	312	−42.9	----	15	312	−42.3	----	30	330	−27.7	----
10,000	24	285	−35.8	----	20	287	−33.0	68	27	288	−34.5	[2]65	21	288	−33.0	67	29	300	−48.3	----	15	309	−46.8	----	30	287	−35.5	----
11,000	23	247	−43.4	----	16	249	−40.5	----	27	249	−42.5	----	20	250	−40.8	----	27	231	−51.5	----	15	231	−49.7	----	29	248	−43.4	----
12,000	22	212	−51.1	----	15	215	−48.9	----	27	214	−50.5	----	18	215	−49.2	----	24	198	−51.3	----	11	200	−51.9	----	29	213	−51.3	----
13,000	20	182	−58.4	----	15	184	−57.4	----	27	184	−58.5	----	17	184	−57.9	----	19	170	−50.1	----	11	171	−52.3	----	29	182	−57.7	----
14,000	16	155	−65.1	----	13	156	−66.3	----	25	156	−64.2	----	17	157	−66.8	----	15	146	−50.4	----	7	146	−53.8	----	29	155	−62.5	----
15,000	14	132	−70.3	----	12	132	−73.8	----	24	132	−67.6	----	17	132	−75.9	----	11	126	−50.9	----	6	126	−53.5	----	25	132	−65.2	----
16,000	11	111	−74.6	----	9	111	−78.9	----	19	112	−68.9	----	14	111	−81.5	----	7	108	−51.1	----					23	112	−67.0	----
17,000	6	93	−78.4	----	7	93	−79.1	----	14	95	−69.8	----	9	93	−80.4	----	5	93	−80.4	----					14	95	−66.5	----
18,000	5	78	−73.6	----					12	81	−68.2	----	5	78	−76.0	----									7	81	−64.8	----
19,000									9	68	−64.5	----																

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during July 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,004	18.7	[2]86	31	840	25.4	[2]39	31	1,017	26.4	[2]85	31	983	24.0	85	29	954	21.1	77	31	914	24.5	[2]36	31	1,014	27.1	[2]83
500	31	958	19.5	[2]67	----	----	----	----	31	961	25.0	[2]73	31	960	24.4	75	----	----	----	----	----	----	----	----	31	959	24.7	[2]74
1,000	31	903	16.9	[2]67	----	----	----	----	31	908	22.1	[2]69	31	908	22.6	70	29	901	21.9	55	31	901	25.6	[2]30	31	905	22.7	[2]57
1,500	31	852	13.6	[2]69	----	----	----	----	31	857	19.2	[2]64	31	857	19.5	75	28	850	19.3	52	31	851	24.1	[2]23	31	855	20.3	[2]42
2,000	31	802	10.8	[2]63	31	804	24.1	[2]35	31	808	16.2	[2]62	31	808	16.1	77	28	802	16.0	51	31	803	20.2	[2]25	31	806	17.7	[2]35
2,500	31	755	8.4	[2]53	31	759	20.6	[2]37	31	762	13.1	[2]61	31	762	12.9	78	28	755	12.7	48	31	757	16.2	[2]29	31	760	14.7	[2]33
3,000	31	711	6.2	[2]50	31	716	16.9	[2]41	31	718	10.4	[2]59	31	718	10.0	74	28	712	9.4	47	31	714	12.2	[2]32	31	716	11.7	[2]28
4,000	30	629	0.9	[2]39	31	636	8.9	[2]54	31	636	4.8	[2]50	30	636	4.7	66	28	630	2.9	42	31	632	4.8	[2]34	30	635	5.6	[2]38
5,000	30	554	−4.9	[2]36	31	563	1.1	[2]69	31	562	−0.6	[2]47	29	562	−0.5	56	28	556	−4.0	44	30	538	−2.6	[2]40	29	561	0.0	[2]31
6,000	30	487	−11.1	[2]37	31	497	−5.7	[2]71	31	495	−5.9	[2]37	29	495	−6.2	49	27	490	−10.8	41	30	492	−9.7	[2]43	28	495	−5.9	[2]31
7,000	30	427	−17.8	[2]43	30	437	−11.6	[2]55	30	435	−12.1	[2]39	28	435	−12.7	46	27	429	−17.8	38	30	431	−16.7	[2]38	28	435	−12.1	[2]30
8,000	30	373	−24.8	[2]44	29	382	−17.8	[2]47	30	381	−18.8	[2]40	28	381	−19.6	45	27	374	−24.9	39	30	377	−24.0	[2]38	28	381	−18.8	[2]30
9,000	29	324	−32.3	[2]50	28	334	−24.6	[2]44	29	332	−26.0	[2]41	27	332	−26.6	44	26	325	−32.3	38	29	327	−31.3	[2]43	27	332	−26.0	[2]34
10,000	29	281	−39.4	----	25	290	−32.0	----	29	289	−33.4	----	27	289	−34.1	44	26	282	−39.6	----	28	284	−39.0	----	27	289	−33.6	----
11,000	29	242	−46.5	----	22	252	−39.7	----	29	250	−41.2	----	27	250	−41.9	----	25	243	−46.2	----	24	245	−45.5	----	27	250	−41.4	----
12,000	28	208	−51.7	----	20	217	−47.6	----	29	215	−48.9	----	27	215	−50.0	----	25	209	−51.4	----	24	211	−50.8	----	27	215	−49.4	----
13,000	28	178	−56.0	----	18	186	−55.1	----	29	185	−56.2	----	24	184	−56.8	----	24	179	−54.8	----	23	181	−54.4	----	27	184	−57.2	----
14,000	26	152	−58.9	----	17	159	−61.9	----	26	157	−62.3	----	24	157	−62.8	----	23	153	−57.4	----	20	154	−56.7	----	27	157	−64.6	----
15,000	24	130	−60.3	----	15	135	−66.9	----	20	134	−66.1	----	23	133	−67.3	----	20	130	−60.0	----	18	132	−59.1	----	26	133	−69.9	----
16,000	22	111	−60.1	----	14	114	−69.5	----	14	113	−67.7	----	21	113	−68.6	----	17	112	−60.5	----	17	112	−60.4	----	25	112	−73.2	----
17,000	20	94	−58.9	----	12	96	−68.1	----	12	95	−66.3	----	16	95	−67.5	----	14	95	−59.9	----	9	96	−59.5	----	16	95	−72.9	----
18,000	15	80	−57.9	----	10	82	−66.0	----	8	81	−64.1	----	12	81	−65.8	----	6	81	−56.7	----					12	80	−69.8	----
19,000													9	69	−62.9	----												

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humitities in percent, obtained by radiosondes during July 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	26	989	20.3	[2]80	31	990	15.8	[2]84	24	1,015	24.9	93	31	840	22.7	[2]48	31	990	20.0	[2]85	31	882	26.8	[2]46	25	812	20.8	32
500	26	958	20.8	[2]66	31	955	18.0	[2]63	24	960	23.6	78	----	----	----	----	31	958	21.4	[2]62	----	----	----	----	----	----	----	----
1,000	26	904	18.4	[2]64	31	901	15.7	[2]61	24	907	21.1	74	----	----	----	----	31	904	18.8	[2]61	----	----	----	----	----	----	----	----
1,500	26	853	15.3	[2]62	31	850	12.2	[2]65	24	856	18.2	74	----	----	----	----	31	853	15.4	[2]66	31	852	26.2	[2]41	----	----	----	----
2,000	26	803	12.2	[2]60	31	800	9.3	[2]66	24	807	15.1	69	31	804	22.6	[2]38	31	803	12.6	[2]53	31	805	22.9	[2]42	25	803	21.7	31
2,500	26	756	9.5	[2]44	31	753	6.6	[2]58	24	760	12.0	65	31	759	19.5	[2]38	31	757	10.2	[2]50	31	759	19.3	[2]47	25	758	20.5	29
3,000	26	712	7.4	[2]41	31	708	3.9	[2]52	24	717	9.1	63	31	716	15.9	[2]41	31	712	7.7	[2]47	31	716	15.5	[2]54	25	715	16.8	29
4,000	26	630	2.2	[2]44	30	625	−1.5	[2]50	23	635	3.4	61	31	635	8.2	[2]54	31	631	2.2	[2]42	31	636	7.7	[2]67	25	634	8.3	31
5,000	26	556	−3.2	[2]36	30	551	−7.2	[2]42	21	561	−2.1	57	31	562	0.2	[2]66	31	556	−3.9	[2]38	31	563	−0.6	[2]67	24	561	−0.3	37
6,000	26	490	−9.1	[2]31	29	484	−13.5	[2]34	20	494	−7.6	57	31	495	−7.3	[2]67	31	490	−9.8	[2]34	31	496	−5.4	[2]58	24	494	−8.7	42
7,000	25	430	−15.9	[2]36	28	424	−20.6	[2]35	19	434	−13.5	53	31	435	−13.5	[2]54	31	430	−16.4	[2]36	29	437	−11.2	[2]49	23	433	−15.4	44
8,000	25	375	−23.2	[2]33	28	369	−28.0	[2]37	15	380	−19.5	50	31	381	−20.4	----	31	375	−23.5	[2]39	29	382	−17.6	[2]46	21	379	−22.7	42
9,000	25	326	−30.8	[2]42	28	320	−35.7	----	15	332	−26.4	49	31	331	−27.8	----	31	326	−30.7	[2]41	29	333	−24.5	[2]45	20	329	−29.6	41
10,000	25	283	−38.5	----	28	277	−43.3	----	15	288	−33.5	46	31	288	−35.3	----	31	283	−38.0	----	29	290	−32.6	----	20	286	−36.4	34
11,000	25	244	−45.8	----	27	238	−49.3	----	14	250	−40.8	----	28	248	−43.1	----	31	244	−45.0	----	29	251	−40.6	----	19	247	−43.1	----
12,000	25	210	−52.2	----	27	205	−52.2	----	14	215	−48.5	----	28	214	−50.7	----	31	210	−51.3	----	28	217	−48.9	----	16	213	−49.6	----
13,000	24	179	−56.5	----	25	175	−53.1	----	12	184	−55.5	----	27	183	−57.6	----	31	180	−55.3	----	28	186	−57.1	----	15	182	−55.3	----
14,000	22	153	−59.7	----	25	149	−54.6	----	10	158	−61.6	----	27	156	−63.0	----	30	153	−58.6	----	27	158	−64.2	----	13	156	−60.0	----
15,000	19	130	−61.7	----	22	128	−55.7	----	9	134	−66.6	----	26	132	−66.3	----	28	131	−61.2	----	25	134	−68.8	----	10	133	−63.5	----
16,000	18	111	−61.2	----	15	110	−55.5	----	9	113	−69.1	----	23	112	−67.1	----	25	111	−61.5	----	22	114	−71.4	----	9	112	−66.4	----
17,000	10	94	−60.3	----	10	93	−54.8	----	6	96	−68.3	----	20	95	−65.3	----	22	95	−60.4	----	15	96	−69.6	----	7	95	−66.7	----
18,000	5	80	−58.4	----	6	80	−55.0	----	6	81	−65.8	----	11	81	−63.0	----	14	81	−58.5	----	10	80	−67.5	----	----	----	----	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	70	−56.8	----	5	68	−63.6	----	----	----	----	----

Altitude (meters) m. s. l.	Glasgow, Mont. (639 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	939	22.0	[2]53	30	887	21.1	[2]46	23	996	21.7	[2]91	31	972	20.2	[2]76	31	994	21.3	[2]83	31	1,015	25.9	[2]90	31	1,010	21.8	[2]85
500	----	----	----	----	----	----	----	----	23	959	22.4	[2]73	31	955	21.7	[2]64	31	958	23.4	[2]61	31	960	25.0	[2]68	31	959	20.9	[2]71
1,000	31	901	22.7	[2]36	----	----	----	----	23	905	20.5	[2]67	31	901	19.5	[2]58	31	904	20.8	[2]56	31	907	22.6	[2]56	31	905	18.5	[2]68
1,500	31	850	19.6	[2]35	30	850	20.3	[2]37	23	854	17.3	[2]65	31	850	15.7	[2]59	31	853	17.6	[2]54	31	856	19.9	[2]50	31	854	15.1	[2]70
2,000	31	802	16.0	[2]38	30	801	17.2	[2]37	23	805	14.2	[2]57	31	801	12.4	[2]56	31	804	14.9	[2]46	31	807	17.2	[2]45	31	804	12.5	[2]63
2,500	31	755	12.0	[2]44	30	755	13.2	[2]40	23	759	11.4	[2]51	31	754	9.4	[2]49	31	758	12.3	[2]40	31	761	14.2	[2]43	31	757	10.0	[2]59
3,000	31	712	8.3	[2]48	30	711	9.0	[2]46	23	714	8.6	[2]46	31	710	6.6	[2]46	31	714	9.4	[2]40	31	717	11.2	[2]41	31	713	7.4	[2]53
4,000	30	629	1.5	[2]42	30	630	1.6	[2]48	23	632	3.2	[2]43	31	628	0.9	[2]37	31	632	3.7	[2]43	31	636	5.9	[2]37	31	630	1.9	[2]47
5,000	29	555	−5.2	[2]42	30	556	−5.1	[2]44	23	559	−2.3	[2]37	30	554	−5.4	[2]32	31	559	−1.9	[2]36	31	562	−0.5	[2]39	31	557	−3.6	[2]44
6,000	28	488	−12.0	[2]36	29	488	−11.9	----	23	492	−8.1	[2]36	30	487	−11.6	[2]27	31	492	−7.7	[2]32	31	495	−5.9	[2]39	31	490	−9.4	[2]41
7,000	28	427	−19.2	----	28	428	−19.1	----	22	432	−14.5	[2]34	30	427	−18.8	[2]28	31	432	−14.3	[2]31	31	436	−12.0	[2]39	31	430	−15.9	----
8,000	28	373	−26.7	----	28	372	−26.6	----	22	377	−21.4	[2]31	30	372	−26.3	----	31	378	−21.6	[2]33	31	381	−18.6	[2]40	31	376	−22.6	----
9,000	28	324	−34.1	----	26	324	−33.9	----	22	328	−28.7	----	30	323	−33.6	----	31	326	−28.9	----	30	333	−25.9	[2]43	31	326	−29.6	----
10,000	28	280	−41.0	----	24	281	−40.8	----	21	286	−36.4	----	30	280	−40.8	----	31	286	−36.1	----	30	289	−33.5	----	30	284	−36.7	----
11,000	27	242	−47.0	----	22	241	−47.1	----	21	247	−44.0	----	30	241	−47.2	----	31	247	−43.4	----	30	250	−41.4	----	29	245	−44.2	----
12,000	27	207	−51.4	----	15	208	−52.2	----	21	212	−51.7	----	29	207	−51.3	----	29	212	−50.4	----	30	215	−49.1	----	28	210	−50.8	----
13,000	27	178	−32.9	----	14	178	−55.0	----	21	181	−58.4	----	28	178	−53.4	----	29	182	−55.6	----	30	185	−56.4	----	28	180	−56.5	----
14,000	25	152	−54.5	----	10	152	−56.2	----	21	154	−64.0	----	24	152	−55.2	----	28	155	−60.2	----	30	157	−62.8	----	27	154	−60.3	----
15,000	23	130	−56.5	----	10	130	−57.3	----	17	131	−67.2	----	21	130	−56.8	----	27	132	−63.8	----	27	134	−68.1	----	24	131	−62.9	----
16,000	17	111	−57.0	----	8	111	−57.3	----	13	111	−66.1	----	18	111	−56.7	----	25	112	−64.4	----	21	113	−71.2	----	19	111	−63.4	----
17,000	13	94	−57.1	----	5	95	−57.3	----	11	94	−64.6	----	15	95	−55.4	----	18	95	−63.0	----	12	96	−69.8	----	12	94	−63.5	----
18,000	7	81	−54.8	----	----	----	----	----	8	80	−62.7	----	8	81	−54.2	----	10	81	−61.1	----	9	81	−66.7	----	6	81	−61.6	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	7	70	−52.5	----	6	69	−59.6	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Mazatlan, Mex. (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,003	28.6	77	30	968	25.4	34	31	1,018	25.1	88	27	995	25.6	[2]73	24	1,016	24.2	[2]85	31	1,014	15.9	[2]77	29	968	27.6	[2]59
500	31	957	26.0	76	30	958	25.0	34	31	962	23.4	85	27	959	26 3	[2]62	24	960	22.4	[2]73	31	957	16.7	[2]66	29	957	28.2	[2]54
1,000	31	904	23.9	72	30	905	21.8	36	31	909	20.6	81	27	906	23.5	[2]64	24	906	19.7	[2]68	31	903	21.6	[2]23	29	904	26.6	[2]48
1,500	30	854	21.4	75	30	854	18.0	40	31	858	17.8	76	27	856	20.3	[2]66	24	855	16.7	[2]66	31	852	20.6	[2]18	29	854	23.0	[2]55
2,000	30	806	18.8	70	30	805	14.4	46	31	808	14.9	73	27	807	17.4	[2]62	24	806	13.9	[2]60	31	804	17.8	[2]18	29	806	19.6	[2]58
2,500	30	760	16.3	65	30	758	11.8	47	31	762	12.3	70	27	761	14.4	[2]54	24	759	11.2	[2]56	31	758	14.9	[2]16	29	761	16.3	[2]55
3,000	30	717	13.5	63	30	714	9.3	45	31	718	9.6	69	27	717	11.6	[2]49	24	715	8.4	[2]52	31	714	11.8	[2]15	29	717	13.4	[2]48
4,000	29	636	7.2	67	30	632	3.2	37	31	636	3.9	67	26	636	5.6	[2]44	24	633	3.0	[2]45	31	633	5.2	[2]15	29	636	7.1	[2]44
5,000	28	563	0.8	76	29	558	−3.2	35	31	562	−1.8	66	26	562	0.2	[2]36	23	559	−2.7	[2]47	31	559	−1.7	[2]20	28	563	1.0	40
6,000	26	495	−5.2	74	29	492	−10.4	35	31	494	−7.6	64	26	496	−5.3	[2]28	21	492	−8.8	[2]43	31	492	−8.8	[2]20	28	496	−4.6	[2]30
7,000	23	437	−11.3	74	29	431	−17.3	36	31	434	−13.6	61	26	436	−11.4	[2]24	21	432	−14.7	[2]43	31	432	−16.2	[2]24	28	436	−10.9	[2]28
8,000	23	382	−17.9	69	29	376	−24.5	35	29	380	−20.2	56	26	382	−18.4	[2]26	----	----	----	----	31	377	−23.6	----	27	382	−17.8	[2]29
9,000	21	333	−24.7	66	29	327	−32.0	35	29	331	−27.2	56	26	333	−25.7	----	----	----	----	----	30	328	−31.3	----	25	333	−25.1	[2]30
10,000	20	290	−32.4	64	29	284	−39.6	40	29	288	−34.4	63	26	289	−33.3	----	----	----	----	----	28	284	−38.5	----	25	290	−32.6	----
11,000	19	251	−40.0	----	28	244	−46.3	----	29	249	−42.0	----	25	250	−41.0	----	----	----	----	----	28	245	−45.2	----	25	252	−40.4	----
12,000	18	217	−48.2	----	28	210	−51.0	----	24	214	−49.6	----	25	216	−48.6	----	----	----	----	----	28	211	−50.8	----	24	217	−47.7	----
13,000	16	185	−57.1	----	26	180	−54.1	----	24	184	−57.0	----	25	185	−56.0	----	----	----	----	----	28	181	−55.0	----	24	186	−55.2	----
14,000	14	158	−64.2	----	25	154	−56.1	----	24	156	−63.2	----	25	156	−62.0	----	----	----	----	----	27	154	−58.7	----	22	158	−62.5	----
15,000	12	134	−70.1	----	24	132	−57.7	----	22	133	−67.2	----	25	134	−66.6	----	----	----	----	----	24	132	−62.1	----	21	135	−68.2	----
16,000	7	113	−74.0	----	22	112	−59.2	----	22	112	−69.3	----	21	114	−68.2	----	----	----	----	----	18	112	−63.8	----	15	114	−71.7	----
17,000	5	96	−73.5	----	17	96	−59.3	----	17	95	−70.1	----	13	96	−67.8	----	----	----	----	----	12	95	−63.2	----	12	96	−71.2	----
18,000	----	----	----	----	13	82	−58.7	----	15	80	−68.9	----	9	81	−65.5	----	----	----	----	----	7	81	−62.4	----	----	----	----	----
19,000	----	----	----	----	8	70	−56.8	----	9	69	−68.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	5	58	−65.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Insufficient data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during July 1943—Continued

STATIONS AND ELEVATIONS IN METERR ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	980	24.3	[2]74	15	1,017	27.6	[2]81	31	969	33.1	[2]30	25	970	21.0	[2]77	31	1,012	17.4	87	31	995	26.1	[2]70	31	987	22.8	[2]80
500	29	958	24.6	[2]62	15	964	24.6	[2]74	31	952	34.9	[2]23	25	958	21.1	[2]71	31	957	20.1	61	31	958	26.1	[2]58	31	957	23.1	[2]66
1,000	29	905	22.7	[2]54	15	910	21.6	[2]72	31	901	32.5	[2]19	25	905	19.4	[2]66	31	903	17.0	60	31	906	22.9	[2]60	31	903	20.6	[2]61
1,500	29	855	20.5	[2]53	15	859	18.8	[2]66	31	852	28.3	[2]22	25	854	16.0	[2]68	31	851	13.4	65	31	855	19.8	[2]59	31	853	17.6	[2]59
2,000	29	806	17.6	[2]50	15	810	16.0	[2]59	31	804	24.0	[2]26	25	804	13.2	[2]61	31	802	10.1	66	31	806	16.6	[2]61	31	803	14.4	[2]55
2,500	29	760	14.5	[2]43	15	763	13.5	[2]57	31	759	19.6	[2]31	25	758	10.8	[2]51	31	755	7.7	61	31	760	13.9	[2]58	31	757	11.4	[2]50
3,000	29	716	11.8	[2]39	15	719	11.0	[2]56	31	716	15.4	[2]35	25	714	8.3	[2]45	31	710	4.9	62	31	716	11.4	[2]51	31	713	8.3	[2]49
4,000	29	635	5.5	[2]43	15	637	5.1	[2]51	31	635	7.4	[2]50	25	632	3.1	[2]42	31	628	−0.3	51	31	635	5.9	[2]49	31	631	2.5	[2]42
5,000	28	561	−0.7	[2]35	15	564	−0.5	[2]45	31	562	0.3	[2]55	25	558	−2.6	[2]37	29	554	−6.3	49	31	562	0.3	[2]38	30	557	−3.7	[2]39
6,000	28	495	−6.4	[2]28	15	497	−6.1	[2]40	31	495	−6.3	[2]52	25	491	−8.3	[2]31	28	486	−12.6	48	31	495	−5.5	[2]36	30	490	−9.9	[2]34
7,000	28	435	−12.9	[2]27	15	437	−12.4	[2]43	31	436	−12.1	[2]42	25	431	−14.4	[2]30	28	426	−19.5	44	31	435	−11.8	[2]34	30	430	−16.4	----
8,000	28	380	−19.5	[2]30	14	382	−19.2	----	30	381	−19.0	[2]42	25	377	−21.3	[2]38	28	371	−26.6	46	31	381	−18.6	[2]37	30	375	−23.6	----
9,000	28	332	−26.6	[2]35	13	334	−26.4	----	30	332	−26.2	[2]39	25	328	−28.8	[2]42	26	322	−34.5	55	31	332	−26.0	[2]38	29	326	−30.8	----
10,000	28	288	−34.1	----	13	290	−33.4	----	30	289	−33.8	----	25	285	−36.2	----	25	278	−42.4	----	31	289	−33.7	----	29	283	−38.1	----
11,000	28	250	−41.4	----	11	252	−41.3	----	30	250	−41.4	----	25	246	−43.3	----	23	240	−48.9	----	31	250	−41.4	----	29	244	−44.8	----
12,000	28	215	−48.9	----	11	217	−48.4	----	26	216	−48.7	----	25	212	−50.2	----	21	205	−53.2	----	31	215	−48.6	----	29	210	−50.8	----
13,000	27	184	−55.6	----	9	185	−56.4	----	19	185	−56.0	----	25	181	−56.3	----	18	175	−55.4	----	31	185	−55.0	----	26	180	−55.2	----
14,000	25	157	−61.0	----	9	158	−62.0	----	14	158	−62.4	----	25	155	−60.6	----	17	150	−57.4	----	31	158	−61.2	----	24	153	−58.5	----
15,000	22	134	−63.8	----	6	134	−66.8	----	13	134	−67.3	----	25	131	−63.7	----	13	128	−58.5	----	30	134	−65.7	----	23	131	−60.3	----
16,000	21	114	−65.3	----	----	----	----	----	10	114	−69.6	----	23	112	−63.4	----	9	109	−57.7	----	27	113	−67.8	----	20	112	−61.6	----
17,000	15	96	−63.4	----	----	----	----	----	9	96	−68.7	----	18	95	−61.9	----	6	93	−57.5	----	19	96	−66.2	----	14	95	−60.0	----
18,000	9	82	−61.9	----	----	----	----	----	6	81	−64.8	----	13	81	−60.1	----	----	----	----	----	17	82	−63.9	----	9	81	−58.8	----
19,000	5	70	−62.2	----	----	----	----	----	----	----	----	----	7	69	−58.5	----	----	----	----	----	7	70	−61.4	----	----	----	----	----

Altitude (meters) m. s. l.	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	987	27.1	[2]73	31	1,011	18.9	[2]79	31	1,016	25.9	[2]86	31	1,007	14.4	[2]83	21	988	15.2	[2]87	31	1,016	20.5	[2]59	31	944	23.0	[2]41
500	31	958	26.5	[2]70	31	956	19.1	[2]57	31	962	23.1	[2]88	31	958	16.6	[2]69	21	957	18.5	[2]68	31	961	17.8	[2]62	----	----	----	----
1,000	31	906	23.7	[2]65	31	903	22.4	[2]22	31	909	20.2	[2]83	31	904	21.8	[2]21	21	903	16.5	[2]67	31	906	14.7	[2]65	31	902	21.8	[2]35
1,500	31	855	21.2	[2]61	31	852	21.9	[2]19	31	858	17.3	[2]73	31	853	21.3	[2]21	21	851	13.7	[2]64	31	854	12.1	[2]66	31	851	18.1	[2]35
2,000	31	807	18.1	[2]57	31	804	19.6	[2]21	31	808	14.9	[2]62	31	805	18.5	[2]20	21	801	10.6	[2]63	31	804	9.9	[2]59	31	802	13.8	[2]41
2,500	31	761	15.5	[2]49	31	758	16.5	[2]23	31	762	12.5	[2]47	31	759	15.4	[2]18	21	754	7.9	[2]57	31	757	7.0	[2]55	31	755	9.8	[2]45
3,000	31	717	12.6	[2]50	31	715	13.1	[2]28	31	718	9.9	[2]38	31	715	12.6	[2]15	21	710	5.3	[2]53	29	712	3.6	[2]51	31	711	5.9	[2]45
4,000	31	636	6.6	[2]42	31	634	6.1	[2]28	29	635	4.6	[2]33	30	634	6.3	[2]19	21	628	0.3	[2]47	29	629	−2.4	[2]54	31	628	−0.4	[2]34
5,000	31	562	1.1	[2]41	31	560	−1.0	[2]26	29	562	−0.6	[2]34	30	560	−1.1	[2]20	21	554	−5.3	[2]39	28	554	−8.4	----	31	554	−6.7	----
6,000	31	496	−4.8	[2]36	31	494	−7.2	----	29	495	−6.2	[2]30	30	493	−8.1	[2]20	21	487	−12.0	[2]34	28	486	−15.1	----	30	487	−13.2	----
7,000	31	436	−10.4	[2]34	31	434	−14.3	----	29	435	−13.4	[2]28	30	433	−15.0	----	21	426	−19.3	[2]31	28	425	−22.0	----	30	426	−20.2	----
8,000	31	382	−17.5	[2]31	25	379	−21.8	----	29	381	−20.7	[2]33	30	379	−22.6	----	20	372	−26.9	[2]35	25	370	−29.2	----	30	371	−27.6	----
9,000	31	334	−24.7	[2]34	25	329	−29.0	----	28	332	−28.5	[2]38	30	329	−30.4	----	19	323	−34.5	[2]37	25	320	−36.3	----	30	322	−34.8	----
10,000	31	290	−32.2	----	25	286	−36.1	----	28	288	−36.6	----	29	286	−37.6	----	19	279	−42.2	----	23	277	−42.9	----	28	278	−41.2	----
11,000	31	251	−40.1	----	25	247	−43.0	----	28	249	−44.7	----	29	247	−43.9	----	19	240	−48.5	----	20	238	−47.7	----	28	240	−47.1	----
12,000	31	217	−47.9	----	23	213	−49.7	----	28	214	−52.8	----	29	212	−49.5	----	19	206	−52.9	----	18	204	−52.0	----	28	206	−51.4	----
13,000	31	186	−55.6	----	21	183	−56.0	----	27	182	−60.0	----	29	182	−54.9	----	18	176	−54.2	----	11	176	−52.6	----	28	177	−52.8	----
14,000	28	158	−62.5	----	20	156	−60.8	----	25	155	−64.8	----	29	155	−59.7	----	17	151	−55.1	----	10	151	−52.9	----	28	151	−53.9	----
15,000	26	134	−67.6	----	18	132	−64.6	----	24	132	−68.6	----	27	132	−64.1	----	12	129	−56.9	----	10	129	−53.5	----	26	130	−55.4	----
16,000	21	114	−70.9	----	17	112	−66.7	----	24	112	−71.4	----	26	112	−66.1	----	10	110	−57.8	----	9	111	−54.2	----	25	111	−56.5	----
17,000	21	96	−70.6	----	13	96	−66.7	----	18	94	−71.8	----	25	95	−65.0	----	8	94	−57.6	----	6	95	−55.2	----	20	95	−56.6	----
18,000	15	81	−67.8	----	11	81	−65.3	----	13	80	−70.1	----	24	81	−62.5	----	6	80	−57.4	----	----	----	----	----	16	81	−55.0	----
19,000	9	69	−64.3	----	----	----	----	----	9	68	−67.6	----	17	69	−60.7	----	----	----	----	----	----	----	----	----	6	70	−53.2	----
20,000	----	----	----	----	----	----	----	----	5	58	−65.1	----	10	58	−58.9	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Swan Island, West Indies (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	1,014	26.7	[2]83	29	776	16.6	66	26	1,018	25.3	[2]90	31	1,000	24.6	88	31	1,016	12.2	[2]94	26	1,018	16.8	[2]74	31	1,013	24.3	[2]76
500	29	959	23.2	[2]80	----	----	----	----	26	962	23.6	[2]79	31	958	24.5	84	31	961	11.9	[2]82	26	962	13.4	[2]73	31	959	22.8	[2]66
1,000	29	906	20.3	[2]74	----	----	----	----	26	909	21.0	[2]73	31	904	21.7	84	31	906	12.6	[2]54	26	907	12.4	[2]57	31	906	20.0	[2]68
1,500	29	855	17.8	[2]61	----	----	----	----	26	858	18.2	[2]71	31	854	19.2	81	31	853	11.0	[2]43	26	855	11.3	[2]45	31	854	16.6	[2]71
2,000	29	806	15.3	[2]54	----	----	----	----	26	809	15.3	[2]70	31	805	16.3	79	31	803	8.7	[2]40	26	804	9.2	[2]34	31	805	13.7	[2]64
2,500	29	760	13.0	[2]46	29	758	15.4	67	26	762	12.6	[2]67	31	759	13.6	81	31	756	6.2	[2]35	26	757	6.9	[2]28	31	758	11.4	[2]53
3,000	29	716	10.4	[2]43	29	714	12.1	72	26	718	10.0	[2]61	31	715	10.7	83	31	711	3.4	[2]38	26	712	4.1	[2]27	31	714	8.8	[2]46
4,000	28	634	4.7	[2]35	29	633	5.0	86	26	636	4.4	[2]60	30	634	4.8	83	31	628	−2.6	[2]36	26	629	−2.4	[2]27	31	632	3.0	[2]43
5,000	27	561	−0.7	[2]35	28	560	−1.1	88	26	562	−1.2	[2]62	27	561	−0.6	79	31	552	−9.0	[2]33	26	554	−8.5	[2]27	30	559	−2.4	[2]41
6,000	25	494	−6.3	[2]32	28	494	−6.8	83	26	495	−6.7	[2]49	27	494	−6.3	71	31	485	−15.4	[2]31	26	486	−15.5	[2]28	29	492	−8.2	[2]39
7,000	24	434	−12.6	[2]32	25	434	−12.5	72	26	435	−12.6	[2]46	27	434	−12.4	60	31	424	−22.2	[2]34	25	425	−22.7	[2]34	29	432	−14.4	[2]38
8,000	19	380	−19.2	[2]32	23	380	−18.6	67	26	381	−19.3	[2]44	26	380	−19.0	65	31	369	−29.2	[2]39	17	370	−30.0	----	29	378	−21.2	----
9,000	19	331	−26.3	----	22	331	−25.5	66	26	332	−26.4	[2]46	25	332	−26.1	60	31	320	−36.6	----	16	321	−37.9	----	29	328	−28.5	----
10,000	19	288	−33.4	----	21	288	−32.8	60	25	289	−34.0	----	24	288	−33.6	53	31	277	−43.7	----	16	277	−45.1	----	29	286	−35.8	----
11,000	18	249	−40.6	----	21	250	−40.7	----	25	250	−42.1	----	23	250	−41.9	----	30	238	−49.0	----	16	238	−51.6	----	29	247	−43.3	----
12,000	17	214	−48.0	----	17	215	−48.1	----	25	215	−50.3	----	22	214	−50.5	----	28	204	−51.6	----	13	204	−55.7	----	27	213	−51.0	----
13,000	15	184	−55.5	----	17	184	−55.9	----	25	184	−58.3	----	19	184	−58.9	----	28	175	−52.0	----	12	174	−56.2	----	26	182	−57.6	----
14,000	13	157	−62.1	----	17	157	−63.6	----	23	157	−64.8	----	19	156	−67.1	----	27	150	−52.8	----	7	149	−59.0	----	26	155	−62.1	----
15,000	10	134	−67.5	----	17	133	−70.8	----	19	133	−69.6	----	16	132	−74.6	----	21	128	−54.7	----	7	127	−60.0	----	23	132	−64.4	----
16,000	8	113	−69.9	----	11	112	−74.7	----	16	112	−70.8	----	11	112	−78.5	----	15	110	−55.3	----	5	108	−62.2	----	21	112	−65.3	----
17,000	7	95	−71.6	----	10	94	−76.6	----	12	95	−69.9	----	8	94	−78.8	----	12	94	−55.1	----	----	----	----	----	14	95	−64.2	----
18,000	6	80	−71.4	----	----	----	----	----	6	80	−67.0	----	----	----	----	----	8	80	−54.1	----	----	----	----	----	7	81	−62.1	----
19,000	----	----	----	----	----	----	----	----	5	68	−63.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during August 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Albany, N. Y. (86 M.)				Albuquerque, N. M. (1620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,002	17.3	[2]87	29	838	25.2	[2]44	31	1,014	26.6	[2]82	31	980	25.0	75	31	953	19.5	70	31	912	22.9	[2]32	31	1,011	27.8	[2]80
500	31	955	18.2	[2]67					31	958	24.6	[2]72	31	959	25.6	68									31	957	24.8	[2]78
1,000	31	901	15.8	[2]65					31	906	21.8	[2]70	31	906	23.6	62	31	900	19.7	60	31	898	24.2	[2]28	31	904	23.0	[2]51
1,500	31	849	12.3	[2]67					31	855	18.7	[2]70	31	856	20.4	66	31	849	17.3	60	31	849	22.8	[2]24	31	853	20.8	[2]43
2,000	31	800	9.3	[2]65	29	803	23.3	[2]39	31	806	15.7	[2]68	31	807	17.1	70	31	801	14.7	58	31	800	18.7	[2]27	31	804	18.4	[2]39
2,500	31	752	6.8	[2]58	29	758	20.4	[2]42	31	760	13.1	[2]64	31	761	14.3	68	31	754	12.1	55	31	754	14.5	[2]30	31	758	15.4	[2]36
3,000	31	708	4.4	[2]54	29	715	16.6	[2]48	31	716	10.5	[2]60	31	717	11.3	68	31	710	9.1	51	31	711	10.5	[2]33	31	715	12.4	[2]38
4,000	31	625	−0.5	[2]40	29	634	8.8	[2]66	30	634	5.3	[2]53	30	636	6.1	54	31	629	2.6	50	31	630	2.8	[2]38	31	634	6.5	[2]36
5,000	31	551	−5.9	[2]33	29	562	1.1	[2]79	30	561	0.1	[2]45	28	562	0.6	52	29	555	−4.5	52	31	555	−4.8	[2]40	31	561	0.7	[2]32
6,000	31	484	−12.1	----	28	495	−5.6	[2]72	30	494	−5.6	[2]35	28	496	−5.0	48	29	488	−11.3	46	31	488	−12.0	[2]36	31	494	−5.3	[2]29
7,000	31	424	−18.8	----	28	436	−11.0	[2]56	30	435	−12.0	[2]32	27	436	−11.4	45	29	428	−17.9	42	30	428	−19.2	[2]30	31	435	−11.7	[2]21
8,000	31	370	−26.0	----	28	382	−17.1	[2]45	29	381	−19.0	[2]32	27	382	−18.0	42	29	373	−24.9	41	28	373	−26.4	[2]30	31	381	−18.5	[2]28
9,000	31	321	−33.4	----	27	333	−24.2	[2]45	29	331	−20.3	[2]32	27	333	−25.0	42	28	324	−31.9	40	27	324	−33.5	----	31	332	−26.0	[2]33
10,000	31	278	−40.4	----	23	290	−31.6	----	29	288	−33.8	----	27	290	−32.3	39	28	281	−38.5	40	26	281	−40.1	----	31	288	−33.7	----
11,000	29	240	−45.7	----	22	251	−39.4	----	29	250	−41.2	----	27	251	−40.0	----	27	243	−44.5	----	21	242	−46.2	----	31	250	−41.3	----
12,000	29	206	−50.6	----	22	217	−47.0	----	28	215	−48.8	----	27	216	−47.7	----	27	209	−48.9	----	18	208	−50.6	----	30	215	−48.8	----
13,000	28	177	−54.4	----	20	186	−54.7	----	26	184	−56.4	----	26	186	−55.1	----	26	179	−52.8	----	16	177	−53.4	----	26	184	−56.4	----
14,000	27	151	−57.4	----	17	158	−61.5	----	20	157	−63.2	----	26	158	−61.9	----	26	153	−56.4	----	9	152	−54.9	----	22	157	−63.9	----
15,000	24	129	−59.9	----	17	134	−66.4	----	16	133	−68.4	----	26	134	−67.7	----	24	130	−59.0	----	7	129	−57.2	----	19	133	−69.6	----
16,000	20	110	−60.7	----	13	114	−69.8	----	11	113	−71.0	----	20	114	−70.5	----	22	111	−60.6	----	5	111	−60.3	----	14	112	−73.8	----
17,000	13	94	−60.2	----	6	96	−70.0	----					15	96	−69.6	----	17	95	−60.0	----					11	94	−74.4	----
18,000	5	79	−57.8	----									7	81	−68.0	----	11	81	−57.4	----					8	79	−68.8	----
19,000																	8	69	−55.2	----								

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex (1,193 m.)				Ely, Nev. (1,908) m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	25	987	18.7	[2]84	31	988	13.8	[2]90	30	1,013	24.0	93	31	839	21.9	[2]56	30	988	19.0	[2]88	31	880	29.1	[2]36	25	810	18.6	34
500	25	956	18.6	[2]73	31	953	15.2	[2]76	30	958	24.0	74					30	957	21.2	[2]68								
1,000	25	902	16.7	[2]64	31	898	12.7	[2]75	30	905	21.5	67					30	903	18.1	[2]61								
1,500	25	850	13.5	[2]61	31	846	9.4	[2]75	30	854	18.5	67					30	851	15.4	[2]59	31	850	29.2	[2]34				
2,000	25	800	10.6	[2]55	31	796	6.5	[2]75	30	805	15.6	63	31	803	22.1	[2]48	30	802	12.7	[2]47	31	804	26.1	[2]36	25	802	19.9	33
2,500	25	754	8.1	[2]50	31	749	3.6	[2]72	30	759	13.2	57	31	757	19.0	[2]46	30	756	10.5	[2]46	31	789	22.1	[2]41	25	756	18.9	31
3,000	25	709	5.8	[2]45	31	704	0.9	[2]69	30	715	10.5	53	31	714	15.3	[2]49	30	711	8.0	[2]40	31	716	17.9	[2]49	25	713	15.0	30
4,000	25	627	−1.0	[2]35	30	621	−4.7	[2]56	29	633	4.6	51	31	634	7.8	[2]59	30	629	2.1	[2]29	31	636	9.8	[2]67	25	632	6.7	33
5,000	25	553	−4.6	[2]31	29	546	−10.7	[2]52	29	560	−.6	48	31	561	0.4	[2]70	30	556	−3.5	[2]33	30	564	2.3	[2]69	25	559	−1.5	38
6,000	25	486	−10.7	[2]29	29	479	−17.1	[2]50	29	494	−6.2	42	31	494	−6.3	[2]73	30	489	−9.4	[2]32	30	497	−3.8	[2]53	24	492	−8.9	45
7,000	25	427	−17.5	[2]35	29	418	−24.5	[2]48	29	434	−12.3	37	31	435	−12.3	[2]62	30	429	−16.1	[2]37	29	438	−9.4	[2]34	24	432	−15.0	44
8,000	25	373	−24.9	----	29	364	−32.0	[2]44	29	380	−18.8	37	29	380	−19.0	[2]56	30	374	−23.1	----	29	383	−15.6	[2]28	21	377	−22.4	42
9,000	25	324	−32.7	----	27	314	−39.3	----	29	331	−25.6	36	29	332	−26.1	----	29	326	−29.7	----	29	335	−22.7	----	21	328	−29.7	38
10,000	25	280	−39.8	----	25	271	−45.3	----	29	288	−32.2	35	29	288	−33.6	----	29	283	−37.0	----	29	292	−30.5	----	21	285	−37.2	----
11,000	25	242	−45.5	----	25	234	−48.2	----	27	250	−39.3	----	29	250	−41.5	----	29	244	−43.5	----	29	253	−38.5	----	21	246	−44.3	----
12,000	25	208	−50.0	----	22	201	−48.7	----	24	216	−46.4	----	28	215	−49.2	----	27	210	−49.7	----	28	219	−46.6	----	20	211	−51.3	----
13,000	24	178	−53.8	----	22	172	−50.2	----	24	185	−53.4	----	27	184	−56.8	----	24	180	−55.0	----	28	188	−54.8	----	17	181	−57.1	----
14,000	22	152	−58.5	----	22	148	−52.5	----	21	158	−60.2	----	24	156	−62.9	----	23	154	−59.9	----	27	160	−62.0	----	16	154	−62.6	----
15,000	21	129	−61.2	----	20	126	−54.0	----	18	134	−64.9	----	22	133	−67.3	----	21	131	−63.2	----	25	136	−68.2	----	15	131	−66.4	----
16,000	16	110	−62.1	----	16	108	−55.1	----	12	114	−67.1	----	19	113	−70.4	----	19	112	−64.1	----	20	115	−72.4	----	12	112	−67.8	----
17,000	9	94	−59.8	----	10	92	−54.1	----	11	96	−68.3	----	13	95	−69.6	----	15	95	−61.7	----	15	97	−72.2	----	8	94	−67.3	----
18,000					5	79	−54.1	----	8	82	−67.2	----	6	81	−66.4	----	7	81	−59.0	----	9	82	−68.0	----				
19,000									6	70	−65.4	----																

Altitude (meters) m. s. l.	Glasgow, Mont.[1] (639 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface					31	885	21.0	[2]37	25	995	20.5	[2]88	31	971	17.9	[2]77	31	992	21.1	[2]80	31	1,013	25.9	[2]90	30	1,008	21.5	[2]76
500									25	958	22.3	[2]61	31	953	19.1	[2]67	31	956	23.2	[2]67	31	958	25.2	[2]69	30	956	21.7	[2]60
1,000									25	904	20.1	[2]60	31	899	16.8	[2]64	31	903	20.2	[2]65	31	905	22.6	[2]60	30	903	18.6	[2]58
1,500					31	847	20.0	[2]33	25	853	16.7	[2]63	31	848	14.0	[2]60	31	852	17.0	[2]64	31	854	20.0	[2]52	30	852	15.0	[2]63
2,000					31	799	16.4	[2]35	25	804	13.9	[2]57	31	799	11.2	[2]55	31	803	14.8	[2]52	31	806	17.6	[2]45	30	802	11.9	[2]55
2,500					31	753	12.4	[2]39	25	757	11.2	[2]42	31	752	8.5	[2]49	31	757	12.7	[2]36	31	760	14.9	[2]42	30	756	9.0	[2]51
3,000					31	709	8.5	[2]45	25	713	8.5	[2]33	31	708	6.0	[2]46	31	713	10.4	[2]31	31	716	12.2	[2]39	30	711	6.4	[2]49
4,000					31	628	0.9	[2]53	24	631	2.9	[2]33	31	626	0.4	[2]42	31	632	4.3	[2]35	31	635	6.7	[2]39	30	629	1.5	[2]38
5,000					31	554	−6.2	[2]52	24	557	−3.1	[2]35	31	552	−6.0	[2]37	30	558	−2.0	[2]33	31	562	1.3	[2]34	30	555	−3.9	[2]28
6,000					31	486	−13.3	[2]53	24	491	−8.7	[2]33	31	485	−12.4	[2]37	30	491	−7.6	[2]30	31	495	−5.0	[2]32	30	488	−10.1	[2]31
7,000					31	426	−20.4	[2]46	24	431	−14.8	----	31	425	−19.4	[2]35	30	431	−14.2	[2]27	30	436	−11.3	[2]30	30	428	−17.0	----
8,000					29	371	−28.1	----	24	377	−21.6	----	31	371	−26.6	[2]37	30	378	−21.3	[2]28	30	381	−18.1	[2]36	29	374	−23.8	----
9,000					28	322	−35.8	----	23	328	−28.4	----	31	322	−33.9	----	30	328	−28.9	----	30	333	−25.6	[2]37	29	325	−30.4	----
10,000					27	278	−42.9	----	23	285	−36.0	----	29	279	−40.9	----	29	286	−36.2	----	30	289	−33.5	----	28	282	−38.2	----
11,000					24	240	−48.2	----	23	246	−43.4	----	28	240	−46.3	----	29	246	−42.8	----	30	250	−41.3	----	27	243	−45.3	----
12,000					17	206	−51.1	----	23	212	−50.4	----	25	206	−50.2	----	28	212	−49.8	----	30	216	−49.1	----	27	209	−51.2	----
13,000					14	176	−53.6	----	20	182	−57.1	----	24	177	−53.0	----	27	182	−56.5	----	29	185	−56.6	----	25	179	−56.9	----
14,000					14	151	−55.4	----	18	155	−63.1	----	21	151	−55.6	----	25	155	−61.8	----	29	157	−63.5	----	23	153	−60.7	----
15,000					9	129	−57.0	----	15	131	−67.7	----	19	129	−57.3	----	22	131	−65.0	----	26	134	−68.7	----	22	130	−64.1	----
16,000					7	111	−58.8	----	12	111	−69.4	----	16	111	−57.6	----	20	112	−67.0	----	20	113	−72.2	----	16	110	−65.6	----
17,000					7	94	−59.1	----	8	94	−66.2	----	12	94	−56.0	----	15	95	−65.0	----	16	95	−72.5	----	14	94	−64.2	----
18,000					5	80	−57.8	----	8	80	−63.2	----	6	81	−54.2	----	12	80	−61.6	----	11	81	−70.3	----	9	79	−61.2	----
19,000																					7	69	−66.0	----				

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during August 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	1,002	28.4	80	31	967	22.7	42	31	1,015	25.2	88	31	993	26.1	[2]67	23	1,014	24.8	[2]80	31	1,013	16.3	[2]77	30	966	28.8	[2]47
500	29	956	23.6	81	31	957	22.4	43	31	960	24.2	85	31	958	26.7	[2]53	23	959	23.4	[2]63	31	956	16.1	[2]64	30	954	29.7	[2]43
1,000	28	904	23.3	76	31	903	19.2	47	31	906	21.3	80	31	905	23.6	[2]57	23	905	21.1	[2]59	31	901	19.6	[2]31	30	903	28.3	[2]42
1,500	28	853	20.7	83	31	852	15.6	56	31	856	18.5	76	31	854	20.2	[2]60	23	854	17.9	[2]59	31	850	18.4	[2]22	30	853	25.1	[2]45
2,000	27	805	18.2	78	31	803	11.9	63	31	807	15.6	72	31	806	17.2	[2]53	23	805	15.0	[2]55	31	802	16.0	[2]18	30	805	21.8	[2]48
2,500	27	759	15.7	73	31	756	8.8	64	31	760	12.8	69	31	760	14.7	[2]49	23	759	12.3	[2]47	31	755	13.5	[2]16	30	760	18.6	[2]47
3,000	27	716	13.5	65	31	711	6.5	57	31	716	10.2	66	31	716	12.2	[2]43	23	715	9.6	[2]45	31	712	10.6	[2]14	30	717	15.5	[2]46
4,000	25	636	7.4	71	31	629	0.9	46	31	635	4.9	64	31	635	6.5	[2]39	23	633	3.8	[2]45	30	630	4.7	[2]13	29	636	9.0	[2]49
5,000	25	562	0.8	78	31	555	−5.0	38	31	562	−0.5	62	31	562	0.4	[2]39	20	560	−1.4	[2]36	30	557	−1.6	----	29	563	2.6	[2]49
6,000	24	496	−5.1	76	31	488	−11.5	33	30	495	−6.3	58	30	495	−4.9	[2]39	18	493	−7.3	[2]34	30	490	−8.6	----	29	497	−3.2	[2]39
7,000	24	436	−11.1	68	31	428	−18.8	33	28	435	−12.6	55	30	435	−10.8	[2]33	17	433	−13.6	[2]32	29	430	−15.8	----	27	438	−8.9	[2]34
8,000	24	382	−17.6	63	31	373	−26.4	33	27	380	−19.2	51	29	382	−17.1	[2]28	----	----	----	----	29	376	−23.1	----	27	383	−15.5	----
9,000	23	334	−24.6	59	31	324	−34.1	29	27	332	−26.3	50	28	333	−24.3	[2]31	----	----	----	----	29	327	−30.3	----	24	335	−22.9	----
10,000	21	290	−32.3	57	31	281	−40.8	----	25	288	−33.5	46	27	290	−32.1	----	----	----	----	----	29	284	−37.3	----	21	292	−30.5	----
11,000	21	252	−40.3	----	30	242	−46.6	----	25	249	−41.1	----	26	252	−40.0	----	----	----	----	----	27	245	−44.0	----	21	253	−38.2	----
12,000	20	217	−48.3	----	28	208	−49.7	----	25	215	−48.6	----	25	217	−48.1	----	----	----	----	----	27	210	−50.0	----	21	218	−45.9	----
13,000	17	186	−56.2	----	27	178	−52.2	----	23	184	−55.7	----	25	186	−55.8	----	----	----	----	----	26	180	−55.1	----	19	187	−53.8	----
14,000	17	158	−63.9	----	25	152	−55.4	----	22	157	−62.1	----	24	158	−62.8	----	----	----	----	----	24	154	−59.7	----	18	160	−61.1	----
15,000	17	134	−70.5	----	23	130	−57.4	----	20	134	−67.6	----	23	134	−68.4	----	----	----	----	----	21	131	−62.4	----	18	136	−67.3	----
16,000	13	114	−74.6	----	20	111	−59.3	----	15	113	−71.4	----	19	113	−71.5	----	----	----	----	----	19	111	−64.0	----	15	115	−72.1	----
17,000	6	95	−74.7	----	16	95	−59.7	----	6	95	−73.0	----	13	96	−69.9	----	----	----	----	----	18	94	−64.4	----	13	97	−74.0	----
18,000	----	----	----	----	11	81	−59.5	----	----	----	----	----	5	81	−66.4	----	----	----	----	----	17	80	−62.4	----	6	82	−68.4	----
19,000	----	----	----	----	8	69	−58.3	----	----	----	----	----	----	----	----	----	----	----	----	----	11	68	−60.5	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	58	−58.3	----	----	----	----	----

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa.[1] (392 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	977	24.1	[2]75	20	1,014	27.8	[2]74	31	909	30.8	[2]54	----	----	----	----	31	1,010	15.8	91	31	993	25.7	[2]73	31	985	21.2	[2]79
500	31	955	24.2	[2]65	20	961	25.3	[2]71	31	952	32.7	[2]40	----	----	----	----	31	955	17.3	68	31	957	25.5	[2]57	31	955	21.2	[2]68
1,000	31	902	23.0	[2]53	20	908	22.1	[2]69	31	901	30.0	[2]38	----	----	----	----	31	900	14.8	69	31	904	22.8	[2]56	31	901	18.5	[2]64
1,500	31	852	20.9	[2]49	20	857	19.2	[2]67	31	851	25.9	[2]44	----	----	----	----	31	848	11.7	73	31	854	20.2	[2]53	31	850	15.8	[2]60
2,000	31	804	18.7	[2]43	20	808	16.2	[2]66	31	804	21.8	[2]51	----	----	----	----	31	799	8.4	73	31	805	17.8	[2]42	31	801	13.6	[2]51
2,500	31	758	15.8	[2]43	20	762	14.0	[2]57	31	758	17.9	[2]57	----	----	----	----	31	752	5.7	71	31	759	15.1	[2]42	31	755	11.6	[2]39
3,000	31	714	12.4	[2]43	20	718	11.5	[2]53	31	715	14.2	[2]58	----	----	----	----	31	707	3.1	67	31	715	12.3	[2]36	31	710	8.9	[2]38
4,000	31	633	5.7	[2]43	20	636	6.2	[2]44	31	635	7.5	[2]57	----	----	----	----	31	624	−1.9	58	31	634	6.1	[2]41	31	629	2.8	[2]39
5,000	31	560	−1.0	[2]46	20	563	0.6	[2]43	31	562	1.0	[2]55	----	----	----	----	31	550	−7.8	45	31	561	0.3	[2]43	31	555	−3.5	[2]35
6,000	31	493	−7.1	[2]33	18	496	−5.1	[2]35	30	495	−4.9	[2]56	----	----	----	----	30	483	−13.7	34	31	494	−5.4	[2]43	29	488	−9.7	[2]37
7,000	31	433	−13.0	[2]29	15	436	−11.8	[2]36	29	436	−10.6	[2]48	----	----	----	----	30	423	−20.6	33	31	435	−11.2	[2]36	29	428	−16.2	----
8,000	31	379	−19.5	[2]30	8	382	−18.2	[2]51	29	382	−17.4	[2]41	----	----	----	----	27	368	−28.0	33	31	381	−18.0	[2]35	29	374	−23.0	----
9,000	31	330	−26.5	[2]34	8	334	−25.8	----	29	333	−24.3	[2]38	----	----	----	----	26	320	−34.9	37	30	332	−25.1	----	29	326	−30.2	----
10,000	31	288	−34.0	----	7	290	−33.2	----	29	290	−31.8	----	----	----	----	----	25	276	−41.6	----	30	289	−32.7	----	28	282	−37.1	----
11,000	31	249	−41.5	----	7	251	−41.5	----	28	252	−39.5	----	----	----	----	----	22	238	−47.3	----	30	250	−40.7	----	26	244	−43.2	----
12,000	30	214	−49.0	----	7	216	−49.5	----	25	217	−47.3	----	----	----	----	----	20	205	−50.7	----	30	216	−48.5	----	22	210	−48.7	----
13,000	30	183	−56.3	----	5	185	−56.8	----	22	186	−55.2	----	----	----	----	----	17	176	−53.2	----	30	185	−55.9	----	21	180	−54.3	----
14,000	27	156	−62.2	----	----	----	----	----	20	158	−62.2	----	----	----	----	----	14	151	−55.8	----	29	158	−62.7	----	21	154	−59.6	----
15,000	25	133	−66.8	----	----	----	----	----	16	135	−67.5	----	----	----	----	----	10	129	−58.6	----	28	134	−68.0	----	19	131	−62.7	----
16,000	23	112	−68.9	----	----	----	----	----	10	114	−70.5	----	----	----	----	----	10	110	−59.3	----	26	114	−70.9	----	18	112	−62.9	----
17,000	18	95	−65.9	----	----	----	----	----	7	96	−69.4	----	----	----	----	----	7	94	−59.2	----	21	96	−69.8	----	11	95	−60.9	----
18,000	17	81	−61.1	----	----	----	----	----	----	----	----	----	----	----	----	----	5	80	−58.0	----	16	81	−66.4	----	7	80	−58.6	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10	69	−64.9	----	----	----	----	----
20,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	58	−64.3	----	----	----	----	----

Altitude (meters) m. s. l.	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	984	20.5	[2]59	31	1,010	20.3	[2]81	31	1,013	26.2	[2]86	31	1,005	14.2	[2]87	31	987	14.8	90	26	1,014	20.4	[2]58	29	943	21.9	[2]37
500	30	937	28.2	[2]62	31	955	18.7	[2]58	31	960	23.2	[2]85	31	957	16.5	[2]66	31	936	16.5	76	26	959	16.8	[2]65	----	----	----	----
1,000	30	904	24.9	[2]68	30	902	21.6	[2]25	31	906	20.2	[2]80	31	902	22.0	[2]15	31	901	14.9	69	26	904	13.5	[2]69	29	900	20.3	[2]34
1,500	30	854	22.1	[2]69	30	851	20.6	[2]26	31	856	17.4	[2]74	31	851	20.9	[2]15	31	849	12.5	68	26	852	10.5	[2]69	29	849	16.2	[2]38
2,000	30	806	19.1	[2]67	30	803	18.6	[2]32	31	806	15.2	[2]62	31	803	17.7	[2]17	31	800	9.6	64	26	802	7.8	[2]66	29	800	12.1	[2]46
2,500	30	760	16.6	[2]58	30	757	15.7	[2]35	31	760	13.0	[2]51	31	757	14.7	[2]15	31	753	7.5	55	26	754	5.3	[2]65	29	753	8.0	[2]50
3,000	30	717	14.1	[2]50	30	713	12.5	[2]36	31	716	10.4	[2]45	31	713	12.3	[2]11	31	708	5.1	52	26	709	3.1	[2]63	29	708	4.9	[2]46
4,000	30	636	8.6	[2]40	30	633	6.1	[2]33	31	634	4.8	[2]37	31	632	7.0	[2]13	30	626	−0.2	47	26	626	−2.0	[2]57	29	626	−1.1	[2]35
5,000	30	563	2.7	[2]36	30	559	−0.2	[2]32	30	560	−0.8	[2]37	31	559	0.4	[2]19	30	552	−6.1	43	26	552	−8.0	[2]56	29	552	−7.2	[2]31
6,000	29	497	−3.2	[2]40	30	493	−6.5	[2]30	29	494	−6.4	[2]26	31	493	−6.2	----	30	485	−12.6	39	26	484	−14.9	[2]57	29	485	−14.0	[2]35
7,000	29	438	−9.7	[2]39	30	433	−12.6	----	29	434	−12.7	[2]24	31	433	−12.9	----	30	424	−19.9	35	26	424	−22.1	[2]59	29	424	−21.3	[2]40
8,000	29	383	−16.6	[2]38	27	379	−19.0	----	27	380	−19.7	----	30	379	−20.1	----	29	370	−26.9	36	25	368	−20.7	----	28	369	−29.1	----
9,000	29	335	−23.9	[2]38	27	331	−25.8	----	27	331	−27.1	----	30	330	−27.7	----	29	321	−34.0	30	24	320	−37.5	----	28	319	−36.7	----
10,000	29	291	−31.3	[2]40	27	288	−32.6	----	27	287	−34.9	----	30	287	−35.2	----	28	278	−40.5	----	23	275	−44.9	----	27	277	−43.7	----
11,000	27	253	−39.0	----	27	249	−39.5	----	25	249	−42.5	----	30	248	−42.0	----	27	240	−45.7	----	17	237	−50.1	----	27	238	−49.0	----
12,000	25	218	−46.8	----	26	215	−46.2	----	23	214	−50.2	----	30	214	−48.8	----	26	206	−49.4	----	16	203	−52.2	----	26	204	−50.5	----
13,000	22	187	−54.6	----	25	185	−53.1	----	22	183	−58.0	----	29	182	−55.3	----	25	177	−53.0	----	15	174	−52.2	----	26	175	−50.8	----
14,000	17	160	−61.7	----	23	158	−59.2	----	21	156	−64.5	----	27	156	−61.1	----	23	151	−56.1	----	13	149	−52.8	----	23	150	−52.7	----
15,000	14	135	−67.5	----	23	134	−64.5	----	18	132	−70.0	----	25	133	−65.6	----	17	129	−57.3	----	11	127	−54.2	----	21	128	−54.4	----
16,000	13	114	−72.2	----	18	114	−67.8	----	16	112	−73.8	----	20	113	−67.7	----	12	110	−58.8	----	9	109	−55.2	----	19	110	−55.5	----
17,000	9	97	−73.4	----	14	97	−69.6	----	12	94	−73.3	----	16	96	−66.2	----	----	----	----	----	6	94	−55.7	----	15	94	−55.8	----
18,000	8	82	−69.2	----	10	82	−69.1	----	8	79	−69.6	----	8	81	−63.6	----	----	----	----	----	----	----	----	----	15	80	−54.6	----
19,000	----	----	----	----	7	70	−67.7	----	5	67	−67.4	----	----	----	----	----	----	----	----	----	----	----	----	----	9	69	−53.5	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during August 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Swan Island, West Indies (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla.[4] (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	17	1,013	26.8	[2]84	30	775	15.7	77	----	----	----	----	31	997	24.4	90	31	1,014	13.0	[2]93	29	1,015	17.3	[2]75	31	1,011	24.7	[2]69
500	17	958	23.6	[2]82	----	----	----	----	----	----	----	----	31	954	24.5	81	31	959	12.3	[2]82	29	960	14.2	[2]75	31	957	23.6	[2]67
1,000	17	905	20.4	[2]76	----	----	----	----	----	----	----	----	31	902	21.7	82	31	903	11.0	[2]68	29	905	12.5	[2]64	31	904	20.5	[2]57
1,500	17	854	17.5	[2]68	----	----	----	----	----	----	----	----	31	851	19.2	81	31	851	9.1	[2]57	29	852	10.6	[2]55	31	853	17.4	[2]61
2,000	17	805	15.0	[2]59	----	----	----	----	----	----	----	----	31	802	16.6	78	31	800	6.9	[2]50	29	802	8.7	[2]44	31	804	14.0	[2]64
2,500	17	758	12.7	[2]50	30	757	14.8	78	----	----	----	----	31	757	14.0	77	31	753	5.0	[2]46	29	755	6.6	[2]40	31	758	10.9	[2]58
3,000	17	715	10.3	[2]50	30	713	12.1	79	----	----	----	----	31	713	11.3	78	31	708	2.5	[2]46	29	710	4.2	[2]37	31	714	8.5	[2]46
4,000	16	633	5.2	[2]33	30	632	5.5	88	----	----	----	----	30	632	5.5	80	31	625	−2.8	[2]42	29	627	−1.4	[2]35	31	632	3.3	[2]38
5,000	16	560	0.0	[2]26	30	559	−0.4	94	----	----	----	----	30	559	−0.2	73	30	550	−8.9	[2]38	29	553	−8.0	[2]34	31	558	−2.0	[2]29
6,000	16	493	−6.0	[2]27	29	493	−5.7	92	----	----	----	----	30	493	−5.8	68	30	483	−15.4	[2]32	28	486	−15.1	[2]26	29	491	−7.9	[2]30
7,000	16	434	−11.8	[2]30	27	434	−11.2	86	----	----	----	----	30	434	−11.8	67	30	422	−22.6	[2]35	28	425	−22.4	[2]42	29	431	−13.7	[2]27
8,000	14	379	−18.1	[2]34	25	380	−17.6	79	----	----	----	----	29	379	−18.3	62	29	367	−30.6	[2]43	21	371	−29.7	----	28	377	−21.1	[2]28
9,000	14	331	−25.0	[2]32	24	332	−24.0	75	----	----	----	----	29	331	−25.2	60	29	318	−38.4	----	21	321	−37.6	----	28	328	−28.0	----
10,000	14	288	−32.3	----	24	289	−31.4	69	----	----	----	----	29	288	−32.7	64	29	275	−45.8	----	21	278	−44.5	----	28	286	−35.1	----
11,000	14	250	−39.8	----	20	251	−38.8	----	----	----	----	----	28	249	−40.5	----	27	236	−50.9	----	17	240	−49.4	----	27	247	−42.1	----
12,000	12	215	−47.0	----	19	216	−46.7	----	----	----	----	----	28	215	−48.9	----	27	202	−51.9	----	15	206	−51.8	----	23	212	−48.7	----
13,000	10	185	−54.2	----	18	185	−54.8	----	----	----	----	----	27	184	−57.1	----	26	173	−51.4	----	13	176	−53.7	----	23	182	−55.4	----
14,000	8	157	−61.4	----	18	158	−62.1	----	----	----	----	----	27	157	−65.2	----	24	148	−52.2	----	11	151	−56.0	----	21	155	−60.7	----
15,000	5	133	−67.3	----	16	134	−68.0	----	----	----	----	----	26	133	−72.9	----	16	127	−53.9	----	8	129	−56.2	----	21	132	−65.1	----
16,000	5	113	−72.3	----	14	114	−72.9	----	----	----	----	----	20	112	−78.7	----	13	109	−54.1	----	5	111	−56.3	----	19	112	−67.5	----
17,000	----	----	----	----	9	96	−75.9	----	----	----	----	----	15	93	−81.3	----	7	93	−53.8	----	----	----	----	----	17	95	−66.0	----
18,000	----	----	----	----	8	81	−77.0	----	----	----	----	----	8	78	−76.6	----	----	----	----	----	----	----	----	----	14	81	−63.4	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	5	66	−71.3	----	----	----	----	----	----	----	----	----	6	69	−61.3	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during September 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,010	12.3	[2]86	30	840	21.5	[2]37	30	1,016	24.6	[2]81	30	984	20.2	68	30	957	12.2	65	29	915	19.5	[2]38	30	1,012	25.5	[2]87
500	30	961	13.4	[2]70	----	----	----	----	30	960	22.4	[2]71	30	962	20.9	62	----	----	----	----	----	----	----	----	30	957	23.2	[2]82
1,000	30	906	10.7	[2]63	----	----	----	----	30	906	19.3	[2]71	30	908	18.8	59	30	902	13.6	55	29	901	21.2	[2]32	30	904	23.6	[2]73
1,500	30	853	8.2	[2]63	----	----	----	----	30	855	16.3	[2]68	30	857	15.9	62	30	850	10.8	56	29	851	21.0	[2]25	30	853	18.2	[2]65
2,000	30	802	5.9	[2]56	30	804	20.5	[2]34	30	806	14.0	[2]56	30	807	13.1	61	30	800	7.6	56	29	802	17.2	[2]27	30	804	15.8	[2]58
2,500	30	755	3.7	[2]47	30	758	17.3	[2]37	30	759	11.7	[2]54	30	761	10.6	55	30	752	4.8	56	29	756	13.2	[2]30	30	758	13.1	[2]57
3,000	30	709	1.3	[2]44	30	715	13.3	[2]42	30	715	9.2	[2]50	30	716	8.2	53	30	708	2.0	54	29	712	9.4	[2]30	30	714	10.3	[2]55
4,000	30	626	−3.8	[2]40	30	634	5.5	[2]55	30	633	3.7	[2]43	28	634	2.9	45	30	624	−4.2	55	29	630	2.4	[2]29	27	633	5.2	[2]45
5,000	30	551	−9.7	[2]35	30	560	−2.5	[2]67	30	560	−1.9	[2]39	27	560	−2.3	44	30	549	−10.3	52	28	556	−4.6	[2]27	27	559	−0.5	[2]45
6,000	30	483	−15.9	[2]29	28	493	−9.2	[2]61	30	493	−7.9	[2]41	26	493	−8.6	38	29	482	−17.3	48	26	489	−12.0	[2]33	27	493	−6.4	[2]39
7,000	30	422	−22.5	[2]33	26	432	−15.8	[2]48	30	433	−14.2	[2]41	23	432	−15.4	37	29	421	−24.1	44	25	428	−19.5	[2]31	26	433	−12.4	[2]40
8,000	30	368	−29.8	----	25	378	−22.8	----	30	379	−20.9	[2]43	22	378	−22.3	39	28	366	−31.3	39	25	374	−27.2	[2]34	24	379	−18.9	----
9,000	30	318	−37.3	----	25	328	−31.0	----	30	329	−27.9	[2]46	22	329	−29.7	40	27	317	−38.1	34	20	324	−35.0	----	22	330	−26.2	----
10,000	29	275	−44.0	----	25	285	−38.6	----	30	286	−35.3	----	20	286	−37.1	51	26	275	−44.5	----	18	241	−42.7	----	22	237	−33.8	----
11,000	29	237	−49.1	----	23	246	−45.7	----	30	247	−43.2	----	19	246	−44.7	----	26	236	−50.0	----	18	241	−50.2	----	22	249	−41.9	----
12,000	29	203	−53.8	----	23	211	−51.9	----	28	213	−50.8	----	19	212	−51.7	----	25	202	−53.3	----	18	207	−55.3	----	22	214	−50.2	----
13,000	29	173	−57.5	----	22	180	−57.4	----	27	182	−58.1	----	18	181	−57.6	----	23	173	−55.2	----	17	176	−59.3	----	21	183	−58.5	----
14,000	27	148	−59.3	----	19	154	−61.7	----	23	155	−64.7	----	15	155	−62.5	----	20	148	−56.0	----	16	150	−61.0	----	17	156	−66.9	----
15,000	26	126	−60.8	----	17	131	−61.6	----	20	131	−69.2	----	14	132	−66.6	----	19	127	−56.3	----	12	127	−62.1	----	15	132	−73.8	----
16,000	21	108	−61.3	----	15	111	−67.8	----	13	111	−69.5	----	10	112	−68.2	----	12	109	−56.9	----	10	109	−62.7	----	11	111	−77.0	----
17,000	17	92	−60.8	----	7	94	−66.4	----	----	----	----	----	6	95	−67.4	----	7	92	−57.0	----	9	92	−62.6	----	7	93	−75.1	----
18,000	9	78	−59.3	----	----	----	----	----	----	----	----	----	5	80	−65.3	----	----	----	----	----	5	78	−61.1	----	----	----	----	----

Altitude (meters) m. s. l.	Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1661 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1193 m.)				Ely, Nev. (1908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	993	13.8	[2]81	29	997	9.4	[2]97	30	1,017	20.0	88	30	840	16.2	44	30	994	12.8	[2]86	30	882	23.3	44	30	811	15.9	34
500	30	961	14.5	[2]67	29	961	11.5	[2]69	30	962	20.6	66	----	----	----	----	30	961	15.2	[2]69	----	----	----	----	----	----	----	----
1,000	30	906	12.5	[2]60	29	905	9.5	[2]59	30	907	17.8	66	----	----	----	----	30	905	12.4	[2]63	----	----	----	----	----	----	----	----
1,500	30	853	9.7	[2]58	29	852	7.2	[2]56	30	856	15.0	63	----	----	----	----	30	853	9.8	[2]60	30	852	24.1	[2]37	----	----	----	----
2,000	30	803	6.8	[2]57	29	801	5.3	[2]50	30	806	12.6	57	30	803	17.7	39	30	803	7.4	[2]54	30	804	21.1	[2]38	30	803	17.3	34
2,500	30	755	4.3	[2]48	29	753	3.5	[2]39	30	759	10.3	55	30	758	14.2	42	30	755	5.1	[2]45	30	758	17.3	[2]41	30	757	16.8	33
3,000	30	710	2.0	[2]40	29	708	1.4	[2]37	30	715	8.2	50	30	714	10.6	46	30	710	2.9	[2]40	30	715	13.4	[2]43	30	714	13.1	34
4,000	30	626	−3.3	[2]37	27	625	−3.5	[2]35	30	633	2.9	42	30	632	3.1	52	30	627	−2.5	[2]39	30	634	5.8	[2]52	30	632	4.8	37
5,000	30	551	−9.0	[2]31	27	550	−9.9	[2]40	29	559	−2.4	44	30	558	−4.8	57	29	552	−8.5	[2]31	29	560	−1.4	[2]49	30	558	−3.3	40
6,000	30	484	−15.7	[2]35	27	482	−16.5	[2]39	29	492	−8.3	42	30	490	−12.3	55	29	485	−14.9	[2]38	28	494	−7.8	[2]35	30	491	−10.7	39
7,000	30	423	−22.9	[2]37	27	422	−23.2	[2]39	28	432	−14.9	40	29	430	−19.5	42	29	424	−21.7	[2]35	26	434	−13.6	[2]30	30	431	−17.8	38
8,000	29	368	−29.8	----	26	367	−30.2	[2]44	26	378	−22.0	40	28	375	−26.9	----	29	369	−29.2	----	26	379	−20.6	----	29	376	−25.3	37
9,000	29	319	−36.9	----	24	318	−37.6	----	26	329	−29.0	49	27	324	−35.1	----	28	319	−36.5	----	25	330	−27.8	----	28	326	−33.3	38
10,000	28	276	−43.5	----	22	275	−44.2	----	25	286	−35.9	----	27	281	−42.9	----	28	276	−42.9	----	24	287	−35.2	----	27	283	−41.0	----
11,000	26	237	−48.4	----	21	236	−50.1	----	23	247	−43.5	----	25	242	−50.1	----	27	238	−48.3	----	24	248	−42.6	----	25	243	−48.2	----
12,000	24	203	−52.3	----	18	203	−54.9	----	23	213	−50.8	----	25	207	−55.4	----	23	205	−52.2	----	24	214	−49.5	----	22	209	−53.4	----
13,000	21	175	−55.1	----	18	173	−57.0	----	22	182	−56.9	----	24	176	−58.4	----	23	175	−54.7	----	24	183	−55.2	----	20	179	−56.9	----
14,000	19	149	−57.8	----	17	148	−58.5	----	18	156	−61.8	----	21	150	−61.0	----	22	150	−57.0	----	23	156	−62.0	----	17	152	−59.6	----
15,000	14	127	−58.7	----	16	126	−59.5	----	16	132	−63.5	----	19	128	−63.0	----	21	128	−58.2	----	21	133	−67.4	----	12	129	−62.2	----
16,000	10	108	−59.1	----	12	108	−57.9	----	13	112	−67.5	----	15	109	−64.2	----	18	109	−59.0	----	18	112	−70.0	----	9	110	−64.1	----
17,000	6	93	−61.6	----	7	92	−57.9	----	11	95	−68.1	----	7	92	−63.9	----	12	93	−58.9	----	10	95	−70.7	----	7	93	−65.1	----
18,000	----	----	----	----	5	79	−59.0	----	8	80	−65.4	----	----	----	----	----	9	79	−58.9	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[4] Observations temporarily discontinued.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during September 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Glasgow, Mont.[4] (639 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	----	----	----	----	30	889	15.9	[2] 38	30	999	15.0	[2] 86	30	974	10.3	[2] 79	30	997	13.2	[2] 84	30	1,016	22.2	[2] 90	26	1,014	16.8	[2] 82
500	----	----	----	----	----	----	----	----	30	962	18.1	[2] 60	30	956	11.0	[2] 71	30	960	15.9	[2] 62	30	959	21.2	[2] 77	26	960	17.3	[2] 67
1,000	----	----	----	----	----	----	----	----	30	907	15.3	[2] 56	30	901	8.8	[2] 67	30	905	12.9	[2] 57	30	906	19.1	[2] 66	26	906	15.3	[2] 65
1,500	----	----	----	----	30	851	15.4	[2] 34	30	855	11.8	[2] 59	30	848	5.8	[2] 71	30	853	10.2	[2] 56	30	855	17.0	[2] 58	26	854	12.4	[2] 58
2,000	----	----	----	----	30	802	11.9	[2] 37	30	805	8.6	[2] 57	30	797	3.3	[2] 63	30	803	7.8	[2] 52	30	806	14.6	[2] 53	26	804	9.8	[2] 57
2,500	----	----	----	----	30	755	6.1	[2] 42	30	757	5.9	[2] 58	30	749	1.2	[2] 53	30	755	5.6	[2] 45	30	759	12.1	[2] 47	26	757	7.5	[2] 49
3,000	----	----	----	----	30	710	4.4	[2] 46	30	712	3.3	[2] 52	30	704	−1.0	[2] 48	30	710	3.5	[2] 42	30	715	9.5	[2] 41	26	712	5.1	[2] 47
4,000	----	----	----	----	30	627	−2.0	[2] 39	29	630	−1.0	[2] 49	30	620	−6.5	[2] 44	30	627	−2.6	[2] 43	30	633	3.5	[2] 46	26	629	−0.4	[2] 42
5,000	----	----	----	----	30	552	−8.0	[2] 37	29	555	−6.2	[2] 45	30	545	−12.7	[2] 45	30	552	−8.4	[2] 38	27	559	−2.1	[2] 36	26	555	−6.2	[2] 40
6,000	----	----	----	----	30	485	−14.5	[2] 35	29	487	−12.5	[2] 41	30	477	−19.5	[2] 48	30	485	−15.0	[2] 38	27	492	−8.2	[2] 34	26	487	−12.7	[2] 37
7,000	----	----	----	----	30	424	−21.9	[2] 36	29	427	−19.3	[2] 35	30	416	−26.7	[2] 48	29	423	−22.4	[2] 40	27	432	−14.5	[2] 41	25	427	−19.7	[2] 40
8,000	----	----	----	----	28	369	−29.8	----	29	372	−26.6	[2] 36	29	362	−33.8	----	29	369	−29.7	[2] 45	27	378	−21.2	[2] 43	24	372	−27.3	----
9,000	----	----	----	----	25	320	−37.7	----	29	323	−34.2	----	29	313	−41.5	----	29	319	−36.9	----	27	329	−28.4	[2] 44	24	323	−34.8	----
10,000	----	----	----	----	23	277	−45.0	----	28	280	−41.6	----	27	270	−47.5	----	29	276	−43.9	----	27	286	−35.6	----	24	279	−41.7	----
11,000	----	----	----	----	20	238	−51.0	----	27	241	−48.6	----	25	231	−51.6	----	28	238	−50.2	----	26	247	−43.3	----	23	241	−48.2	----
12,000	----	----	----	----	18	204	−55.8	----	27	207	−54.9	----	23	198	−53.1	----	27	204	−53.6	----	26	212	−51.0	----	22	207	−54.2	----
13,000	----	----	----	----	17	174	−58.0	----	27	177	−59.2	----	22	169	−53.3	----	25	174	−56.0	----	25	182	−58.1	----	22	176	−58.8	----
14,000	----	----	----	----	16	149	−59.3	----	25	150	−61.7	----	21	145	−53.5	----	21	149	−58.7	----	25	155	−64.2	----	20	151	−62.2	----
15,000	----	----	----	----	12	127	−60.1	----	25	128	−63.9	----	15	124	−54.3	----	18	127	−60.8	----	19	131	−68.6	----	15	128	−63.2	----
16,000	----	----	----	----	8	108	−60.1	----	17	109	−64.9	----	12	106	−54.3	----	14	108	−61.2	----	16	111	−71.3	----	10	109	−63.8	----
17,000	----	----	----	----	----	----	----	----	15	92	−63.8	----	----	----	----	----	8	93	−61.0	----	6	94	−70.2	----	5	95	−63.0	----
18,000	----	----	----	----	----	----	----	----	5	78	−61.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	1,002	27.9	[2] 81	30	966	24.1	38	30	1,015	25.1	87	27	997	18.9	[2] 76	27	1,109	20.7	[2] 77	30	1,012	17.9	[2] 75	30	971	21.8	[2] 61
500	29	956	25.5	[2] 79	30	956	24.8	38	30	959	23.1	87	27	961	19.7	[2] 57	27	962	18.7	[2] 65	30	956	19.1	[2] 55	30	958	22.1	[2] 58
1,000	29	903	23.0	[2] 76	30	903	22.9	37	30	906	20.1	87	27	907	16.5	[2] 58	27	907	15.9	[2] 65	30	902	21.0	[2] 28	30	905	20.4	[2] 57
1,500	29	853	20.5	[2] 73	30	852	19.4	39	30	855	17.2	84	27	855	13.7	[2] 53	27	855	13.5	[2] 56	30	851	19.9	[2] 19	30	855	17.7	[2] 57
2,000	29	805	17.9	[2] 73	30	804	16.1	41	30	806	14.4	79	27	805	11.7	[2] 46	27	805	11.0	[2] 49	30	802	17.2	[2] 13	30	805	15.1	[2] 56
2,500	29	759	15.1	[2] 69	30	757	12.8	39	30	760	11.9	79	27	758	9.5	[2] 48	27	758	8.5	[2] 42	29	756	14.2	[2] 13	30	759	12.2	[2] 53
3,000	29	715	12.4	[2] 68	30	714	9.7	38	30	716	9.4	76	27	714	7.1	[2] 49	27	714	5.8	[2] 36	29	713	10.9	[2] 13	30	715	9.4	[2] 57
4,000	28	634	6.3	[2] 70	30	632	2.9	39	27	634	4.3	67	27	632	2.0	[2] 43	26	631	0.5	[2] 37	25	631	3.9	----	26	633	3.3	[2] 52
5,000	26	561	0.9	[2] 70	30	558	−4.0	41	27	560	−1.2	64	27	557	−3.9	[2] 40	25	556	−5.7	[2] 35	24	557	−3.2	----	26	559	−2.8	[2] 45
6,000	24	495	−4.3	[2] 63	30	490	−11.4	41	26	494	−7.0	61	27	490	−9.9	[2] 44	25	489	−12.3	[2] 32	24	490	−10.5	----	25	492	−9.7	[2] 40
7,000	24	435	−10.3	[2] 59	29	430	−18.9	41	26	434	−13.3	59	27	430	−16.7	[2] 41	25	428	−18.6	[2] 35	23	430	−18.3	----	23	431	−16.5	[2] 33
8,000	24	382	−16.9	[2] 52	29	375	−26.7	40	26	380	−19.9	56	26	375	−24.3	[2] 42	----	----	----	----	23	375	−26.0	----	22	377	−24.0	[2] 32
9,000	24	333	−24.3	[2] 51	28	325	−34.4	36	25	331	−26.8	59	26	326	−31.7	----	----	----	----	----	22	326	−33.7	----	22	327	−31.5	----
10,000	24	290	−31.7	[2] 58	28	282	−41.7	----	25	287	−34.5	54	25	283	−38.8	----	----	----	----	----	21	282	−41.2	----	21	285	−38.8	----
11,000	24	252	−39.9	----	28	242	−48.6	----	24	248	−42.8	----	25	244	−46.3	----	----	----	----	----	19	243	−48.1	----	19	246	−46.2	----
12,000	24	217	−48.4	----	27	208	−54.2	----	22	214	−50.7	----	24	210	−53.6	----	----	----	----	----	16	208	−53.3	----	19	211	−52.7	----
13,000	24	186	−56.9	----	26	178	−57.1	----	21	183	−58.4	----	22	179	−59.0	----	----	----	----	----	15	178	−56.2	----	17	180	−57.6	----
14,000	23	158	−65.0	----	25	151	−58.9	----	20	155	−65.4	----	21	153	−63.3	----	----	----	----	----	12	152	−59.6	----	14	153	−61.4	----
15,000	21	134	−72.9	----	22	129	−60.7	----	18	132	−71.5	----	18	130	−66.3	----	----	----	----	----	11	130	−63.0	----	13	130	−64.4	----
16,000	19	113	−78.9	----	18	110	−61.9	----	14	111	−75.6	----	15	110	−67.1	----	----	----	----	----	9	111	−65.0	----	11	111	−66.8	----
17,000	14	95	−79.8	----	14	94	−61.8	----	11	93	−73.1	----	9	93	−63.8	----	----	----	----	----	8	94	−64.3	----	8	94	−65.8	----
18,000	8	79	−75.0	----	9	80	−60.6	----	5	79	−71.1	----	5	79	−62.5	----	----	----	----	----	6	79	−62.4	----	5	79	−62.5	----
19,000	5	66	−71.7	----	5	68	−59.1	----	----	----	----	----	----	----	----	----	----	----	----	----	5	68	−60.1	----	----	----	----	----

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Pensacola, Fla.[4] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa.[4] (362 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	983	16.0	[2] 72	----	----	----	----	30	970	27.7	[2] 47	----	----	----	----	28	1017	12.0	89	30	998	17.4	[2] 75	30	991	13.4	[2] 75
500	30	961	16.5	[2] 69	----	----	----	----	30	953	31.4	[2] 31	----	----	----	----	28	961	13.8	75	30	961	17.7	[2] 59	30	959	13.7	[2] 60
1,000	30	906	14.5	[2] 51	----	----	----	----	30	901	30.0	[2] 26	----	----	----	----	28	905	11.4	70	30	906	14.9	[2] 57	30	904	10.7	[2] 60
1,500	30	853	11.9	[2] 47	----	----	----	----	30	851	25.8	[2] 29	----	----	----	----	28	852	9.4	67	30	854	12.1	[2] 54	30	851	8.0	[2] 62
2,000	30	803	9.1	[2] 50	----	----	----	----	30	803	21.5	[2] 33	----	----	----	----	27	802	7.2	68	30	804	9.9	[2] 46	30	800	5.3	[2] 55
2,500	30	756	6.5	[2] 46	----	----	----	----	30	758	16.8	[2] 37	----	----	----	----	27	754	5.0	63	30	757	7.5	[2] 41	30	752	2.6	[2] 54
3,000	30	711	4.0	[2] 41	----	----	----	----	30	715	12.5	[2] 44	----	----	----	----	27	710	2.8	60	30	712	4.7	[2] 44	30	707	0.5	[2] 43
4,000	30	628	−1.4	[2] 41	----	----	----	----	30	633	4.6	[2] 46	----	----	----	----	27	627	−2.0	54	30	629	−0.6	[2] 43	30	624	−5.2	[2] 42
5,000	30	554	−7.4	[2] 40	----	----	----	----	29	560	−2.1	[2] 42	----	----	----	----	27	552	−7.7	50	30	555	−6.1	[2] 38	30	548	−11.2	[2] 39
6,000	30	486	−14.3	[2] 43	----	----	----	----	29	493	−8.7	[2] 34	----	----	----	----	25	485	−13.3	47	30	487	−12.4	[2] 36	30	481	−17.7	[2] 37
7,000	30	425	−21.1	[2] 45	----	----	----	----	28	433	−15.5	[2] 32	----	----	----	----	24	425	−20.0	43	30	427	−19.5	[2] 35	30	420	−24.7	----
8,000	30	370	−28.9	[2] 46	----	----	----	----	27	378	−23.2	[2] 36	----	----	----	----	24	370	−27.2	40	30	372	−26.8	----	29	365	−31.9	----
9,000	30	321	−36.6	----	----	----	----	----	27	328	−31.0	----	----	----	----	----	24	320	−34.7	40	28	323	−34.4	----	29	316	−38.7	----
10,000	28	278	−44.1	----	----	----	----	----	26	285	−38.2	----	----	----	----	----	24	278	−41.8	----	28	280	−42.0	----	28	273	−45.6	----
11,000	28	239	−50.8	----	----	----	----	----	25	246	−44.6	----	----	----	----	----	22	239	−47.8	----	25	241	−48.4	----	26	234	−50.7	----
12,000	27	204	−55.2	----	----	----	----	----	24	211	−50.6	----	----	----	----	----	19	205	−53.1	----	20	207	−54.1	----	23	200	−53.3	----
13,000	27	174	−57.0	----	----	----	----	----	23	181	−56.0	----	----	----	----	----	14	176	−56.6	----	15	178	−57.1	----	20	172	−55.3	----
14,000	27	149	−58.9	----	----	----	----	----	19	154	−61.3	----	----	----	----	----	10	151	−59.9	----	15	152	−60.8	----	19	146	−56.3	----
15,000	24	127	−60.3	----	----	----	----	----	18	132	−65.4	----	----	----	----	----	10	128	−61.8	----	14	129	−63.7	----	15	123	−57.8	----
16,000	21	108	−60.8	----	----	----	----	----	16	112	−68.0	----	----	----	----	----	8	109	−60.3	----	13	110	−64.6	----	12	107	−56.2	----
17,000	14	92	−60.8	----	----	----	----	----	9	95	−68.4	----	----	----	----	----	----	----	----	----	10	93	−63.8	----	8	91	−58.5	----
18,000	7	79	−59.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	80	−62.5	----	5	77	−58.2	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during September 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	987	22.7	[2] 78	29	1,009	19.3	[2] 83	29	1,012	26.0	[2] 86	30	1,005	15.3	[2] 87	30	991	10.1	85	30	1,014	19.3	[2] 50	30	946	17.7	[2] 42
500	28	959	21.8	[2] 60	29	955	20.9	[2] 45	29	959	23.4	[2] 55	30	956	18.1	[2] 64	30	959	10.3	79	30	959	17.6	[2] 54				
1,000	28	905	19.5	[2] 66	29	901	22.5	[2] 30	29	905	20.5	[2] 81	30	902	22.5	[2] 22	30	903	8.2	76	30	905	16.1	[2] 50	30	903	19.2	[2] 31
1,500	28	854	17.0	[2] 66	29	851	20.8	[2] 24	29	855	17.7	[2] 74	30	852	20.9	[2] 18	30	850	5.7	77	30	853	13.8	[2] 47	30	852	15.4	[2] 32
2,000	28	805	14.6	[2] 62	29	802	18.0	[2] 27	29	805	15.1	[2] 64	30	803	17.9	[2] 17	30	799	3.6	73	30	803	11.1	[2] 42	30	802	11.6	[2] 34
2,500	28	759	12.0	[2] 52	29	757	14.3	[2] 29	28	759	12.8	[2] 57	30	757	14.5	[2] 18	30	751	1.7	62	30	756	8.5	[2] 38	30	755	8.5	[2] 37
3,000	28	714	9.4	[2] 49	29	713	10.9	[2] 33	27	715	10.5	[2] 46	30	713	11.2	[2] 16	30	706	−0.4	58	30	711	6.1	[2] 39	30	711	5.6	[2] 34
4,000	28	633	3.6	[2] 52	29	632	4.2	[2] 28	27	634	5.5	[2] 41	29	632	4.9	[2] 17	30	622	−5.8	53	30	629	−0.3	[2] 39	29	628	0.3	[2] 31
5,000	28	559	−2.2	[2] 50	29	558	−2.3	[2] 38	27	560	−0.2	[2] 39	29	558	−2.0	[2] 16	29	547	−11.9	48	30	555	−6.5	[2] 44	29	554	−6.6	[2] 29
6,000	28	492	−7.7	[2] 46	28	491	−8.6	----	27	494	−6.2	[2] 34	29	492	−9.0	----	29	479	−19.0	47	30	488	−13.4	[2] 53	29	486	−13.4	[2] 28
7,000	28	432	−14.1	[2] 49	27	431	−15.8	----	25	434	−12.6	[2] 36	29	431	−16.6	----	28	418	−25.0	44	30	428	−20.7	[2] 58	29	426	−20.6	----
8,000	27	378	−20.8	[2] 48	17	377	−23.5	----	23	380	−19.9	[2] 40	29	377	−24.7	----	28	364	−32.3	40	30	371	−28.6	----	28	370	−28.2	----
9,000	26	329	−27.7	[2] 48	17	327	−30.5	----	23	332	−26.7	----	28	327	−32.1	----	26	315	−39.6	38	30	322	−36.1	----	27	321	−35.9	----
10,000	26	286	−35.1	[2] 56	17	284	−37.5	----	23	288	−34.4	----	28	284	−39.1	----	25	272	−45.4	----	30	279	−43.9	----	27	278	−43.7	----
11,000	26	247	−42.7	----	16	245	−43.8	----	23	249	−41.8	----	28	245	−46.0	----	24	234	−50.4	----	30	239	−51.0	----	27	239	−50.7	----
12,000	26	213	−50.5	----	16	211	−49.5	----	21	215	−49.3	----	28	210	−51.4	----	23	200	−52.9	----	29	205	−56.5	----	27	205	−56.0	----
13,000	26	182	−58.1	----	16	181	−55.1	----	21	184	−56.8	----	28	180	−56.3	----	21	172	−54.2	----	26	175	−58.9	----	27	175	−58.5	----
14,000	25	155	−65.6	----	14	154	−60.1	----	20	157	−63.0	----	27	153	−60.4	----	19	146	−55.0	----	21	149	−59.9	----	26	149	−58.8	----
15,000	24	131	−72.1	----	14	131	−64.4	----	19	133	−68.2	----	25	131	−64.2	----	14	123	−56.2	----	19	127	−60.2	----	22	127	−59.4	----
16,000	18	110	−73.6	----	11	112	−67.6	----	18	113	−71.6	----	14	111	66.1	----	10	107	−56.3	----	13	109	−60.6	----	21	109	−59.5	----
17,000	15	93	−71.6	----	10	95	−69.1	----	18	95	−71.7	----	12	94	−66.5	----	5	90	−54.7	----	12	92	−60.3	----	18	92	−58.6	----
18,000	9	79	−68.3	----	5	81	−67.2	----	14	80	−69.6	----	9	80	−65.1	----					8	79	−60.5	----	9	79	−58.7	----
19,000									13	68	−67.2	----	5	68	−62.0	----												

Altitude (meters) m. s. l.	Swan Island, West Indies (10 m.)				Tacubaya, Mex. (2,306 m.)				Tampa, Fla.[4] (3 m.)				Tapachula, Mex. (115 m.)				Tatoosh Island, Wash (31 m.)				Tongue Point, Oregon[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	27	1,012	27.1	[2] 84	30	774	16.2	74	----	----	----	----	30	997	23.8	92	30	1,013	12.6	[2] 90	23	1,016	17.3	[2] 72	30	1,017	18.5	[2] 73
500	27	958	24.0	[2] 86	----	----	----	----	----	----	----	----	30	954	24.6	81	30	959	15.4	[2] 65	23	960	15.6	[2] 65	30	962	17.4	[2] 60
1,000	27	904	21.4	[2] 82	30	713	12.2	81	----	----	----	----	30	901	22.2	80	30	904	14.7	[2] 47	23	906	15.4	[2] 45	30	907	14.5	[2] 61
1,500	26	854	18.8	[2] 79	----	----	----	----	----	----	----	----	30	851	19.3	79	30	852	12.6	[2] 41	23	854	14.4	[2] 35	30	855	11.8	[2] 58
2,000	26	804	16.1	[2] 78	----	----	----	----	----	----	----	----	30	802	16.6	80	30	802	10.5	[2] 34	23	804	12.3	[2] 33	30	805	9.0	[2] 61
2,500	26	759	13.3	[2] 74	30	756	15.1	76	----	----	----	----	30	756	14.1	80	30	755	7.7	[2] 34	23	757	9.8	[2] 31	30	757	7.0	[2] 55
3,000	26	715	10.6	[2] 72	30	713	12.2	81	----	----	----	----	30	713	11.5	87	30	710	5.1	[2] 32	23	713	7.4	[2] 29	30	713	5.0	[2] 48
4,000	26	634	5.1	[2] 67	30	632	5.9	92	----	----	----	----	29	632	5.8	88	30	628	−0.4	[2] 30	23	631	1.4	[2] 27	30	630	−0.7	[2] 43
5,000	25	560	−0.4	[2] 61	29	559	0.2	90	----	----	----	----	27	560	0.3	84	30	553	−7.1	[2] 34	22	557	−5.3	[2] 32	30	555	−6.5	[2] 40
6,000	25	494	−6.1	[2] 64	27	493	−5.3	85	----	----	----	----	25	494	−5.2	79	30	486	−13.9	[2] 38	22	489	−12.8	[2] 36	30	488	−12.8	[2] 40
7,000	25	435	−11.9	[2] 63	25	434	−10.6	75	----	----	----	----	25	434	−11.2	69	29	426	−21.0	[2] 38	22	428	−20.3	[2] 40	30	427	−19.7	[2] 41
8,000	24	380	−18.6	[2] 59	23	380	−16.8	68	----	----	----	----	24	380	−17.8	64	27	371	−28.2	----	13	373	−27.8	----	30	372	−27.1	[2] 40
9,000	24	332	−25.6	[2] 56	22	332	−23.6	60	----	----	----	----	24	332	−24.7	61	26	322	−35.9	----	13	324	−35.7	----	30	323	−34.6	----
10,000	23	288	−33.3	----	22	289	−31.0	58	----	----	----	----	24	288	−32.4	----	22	278	−43.7	----	10	281	−42.7	----	29	280	−41.1	----
11,000	21	250	−41.4	----	19	251	−38.6	49	----	----	----	----	23	250	−40.2	----	21	239	−50.8	----	9	242	−49.5	----	27	241	−47.8	----
12,000	17	215	−49.2	----	19	216	−47.2	----	----	----	----	----	22	216	−48.8	----	21	204	−55.9	----	8	207	−56.5	----	24	206	−54.4	----
13,000	13	184	−57.5	----	18	185	−55.4	----	----	----	----	----	22	184	−57.6	----	20	175	−58.4	----	7	177	−61.3	----	23	176	−57.9	----
14,000	13	157	−64.6	----	17	158	−64.0	----	----	----	----	----	22	157	−66.6	----	18	149	−60.0	----	7	150	−62.2	----	19	150	−61.1	----
15,000	11	133	−70.3	----	16	134	−72.5	----	----	----	----	----	19	133	−74.6	----	13	128	−60.3	----	5	128	−63.1	----	18	127	−62.8	----
16,000	9	112	−73.5	----	13	112	−79.2	----	----	----	----	----	16	111	−60.9	----	11	109	−60.4	----					12	108	−63.6	----
17,000	6	95	−75.1	----	8	95	−82.2	----	----	----	----	----	8	94	−82.3	----	6	92	−59.3	----					7	92	−62.1	----
18,000									----	----	----	----													5	78	−60.3	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during October 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	28	1,005	8.1	[2] 83	30	838	14.7	[2] 35	31	1,015	19.0	[2] 78	30	982	14.1	[2] 71	21	926	18.3	[2] 46	31	955	8.1	64	31	914	11.5	[2] 89
500	28	956	7.8	[2] 70	----	----	----	----	31	958	18.9	[2] 53	30	959	16.1	[2] 60												
1,000	28	906	5.1	[2] 70	----	----	----	----	31	904	15.8	[2] 53	30	904	13.5	[2] 58	21	901	18.1	[2] 43	31	900	11.1	57	31	901	12.8	[2] 61
1,500	28	846	2.9	[2] 69	----	----	----	----	31	852	13.2	[2] 49	30	852	11.0	[2] 60	21	851	16.6	[2] 36	31	847	8.9	53	31	848	11.9	[2] 43
2,000	28	795	1.0	[2] 65	30	802	14.7	[2] 30	31	802	10.8	[2] 46	30	802	8.5	[2] 56	21	801	13.5	[2] 35	30	797	6.9	48	31	799	8.1	[2] 48
2,500	28	747	−0.3	[2] 59	30	755	11.3	[2] 32	31	756	9.1	[2] 35	30	755	6.3	[2] 51	21	755	10.3	[2] 35	30	750	4.3	45	31	751	4.2	[2] 53
3,000	28	702	−2.4	[2] 54	30	711	7.2	[2] 30	31	711	6.7	[2] 35	30	710	3.8	[2] 42	21	711	6.7	[2] 36	30	704	1.5	43	31	706	0.4	[2] 57
4,000	28	618	−6.8	[2] 44	30	620	−1.0	[2] 50	31	629	1.6	[2] 25	30	628	−1.4	[2] 32	21	628	0.3	[2] 34	30	621	−4.2	40	31	623	−6.1	[2] 59
5,000	27	543	−12.9	[2] 41	30	554	−7.6	[2] 48	31	555	−4.1	[2] 24	30	553	−7.2	[2] 31	19	554	−5.6	[2] 26	28	548	−10.2	37	30	547	−12.4	[2] 62
6,000	25	476	−19.7	[2] 42	27	486	−14.2	[2] 39	30	488	−10.6	----	30	485	−13.8	[2] 33	19	487	−11.8	----	28	480	−17.3	37	30	479	−19.2	[2] 39
7,000	25	415	−27.0	[2] 44	26	426	−20.9	[2] 31	29	428	−17.2	----	30	424	−21.1	[2] 32	19	426	−19.3	----	28	419	−24.9	36	28	419	−26.3	[2] 57
8,000	25	360	−33.8	----	24	370	−28.3	----	28	374	−23.7	----	26	370	−28.2	[2] 36	19	372	−27.1	----	28	364	−32.9	26	26	364	−34.1	----
9,000	25	311	−40.4	----	24	321	−35.4	----	25	326	−30.5	----	25	321	−35.1	[2] 40	17	323	−34.5	----	28	315	−40.6	----	25	315	−41.5	----
10,000	22	268	−46.3	----	23	278	−42.3	----	24	283	−37.0	----	23	278	−41.3	----	17	280	−41.8	----	26	271	−47.3	----	25	271	−47.9	----
11,000	22	231	−50.6	----	21	239	−48.3	----	24	244	−44.0	----	21	240	−46.5	----	16	241	−49.1	----	22	232	−52.3	----	25	233	−51.9	----
12,000	20	198	−54.4	----	17	205	−53.7	----	23	210	−51.3	----	20	206	−51.7	----	16	206	−55.6	----	22	198	−55.4	----	24	199	−55.2	----
13,000	17	170	−57.0	----	15	175	−58.1	----	22	180	−58.4	----	19	177	−56.4	----	16	176	−61.0	----	20	170	−56.4	----	20	170	−56.7	----
14,000	14	145	−59.5	----	14	150	−62.0	----	21	153	−64.5	----	18	151	−61.2	----	12	149	−65.0	----	19	144	−56.7	----	20	145	−57.8	----
15,000	12	124	−61.4	----	9	128	−65.7	----	16	129	−68.8	----	17	128	−65.3	----	8	126	−69.8	----	15	124	−57.8	----	15	123	−57.8	----
16,000	11	108	−61.5	----	7	108	−67.4	----	10	110	−72.2	----	14	109	−67.6	----	5	107	−70.4	----	12	105	−60.0	----	10	105	−57.6	----
17,000	7	90	−61.0	----	6	92	−66.5	----	5	92	−71.5	----	9	93	−67.8	----					9	90	−59.3	----				
18,000													5	79	−64.2	----					5	77	−57.4	----				

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during October 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,015	20.6	[2]86	31	990	8.0	[2]81	30	991	5.4	[2]84	31	1,014	14.4	85	31	838	9.3	[2]43	31	991	7.4	[2]84	31	882	16.4	[2]36
500	31	958	20.3	[2]68	31	957	7.9	[2]73	30	954	5.5	[2]74	31	958	17.0	61	----	----	----	----	31	958	8.5	[2]73	----	----	----	----
1,000	31	905	17.8	[2]54	31	900	5.6	[2]67	30	898	3.6	[2]71	31	904	14.7	56	----	----	----	----	31	902	6.0	[2]68	----	----	----	----
1,500	31	854	15.5	[2]44	31	847	3.4	[2]63	30	844	1.7	[2]70	31	851	12.0	55	----	----	----	----	31	848	3.6	[2]66	31	852	19.3	[2]32
2,000	31	804	13.3	[2]35	31	796	1.6	[2]64	30	793	−0.6	[2]68	31	802	9.9	47	31	800	11.1	[2]36	31	797	1.9	[2]52	31	802	15.9	[2]33
2,500	31	758	10.5	[2]37	31	747	−0.2	[2]54	30	744	−2.2	[2]63	31	755	7.8	39	31	753	7.7	[2]38	31	749	0.4	[2]45	31	756	11.7	[2]38
3,000	31	713	7.8	[2]39	31	702	−1.9	[2]41	30	699	−4.2	[2]58	31	710	5.9	33	31	708	3.7	[2]41	31	703	−1.6	[2]39	31	712	8.0	[2]40
4,000	31	631	2.5	[2]35	31	618	−6.8	[2]35	29	615	−8.9	[2]51	29	627	0.6	30	31	625	−4.0	[2]46	31	620	−7.1	[2]41	31	630	1.1	[2]37
5,000	30	557	−2.4	[2]28	30	544	−12.8	[2]35	28	540	−14.6	[2]54	29	553	−5.5	32	31	550	−11.2	[2]47	30	544	−13.4	[2]43	29	556	−4.7	[2]22
6,000	30	490	−8.4	[2]24	29	476	−19.3	[2]34	28	472	−20.9	[2]52	28	486	−11.9	31	30	482	−18.5	[2]44	30	477	−20.0	[2]43	28	489	−10.9	[2]21
7,000	30	430	−15.3	[2]28	28	416	−26.2	[2]35	27	412	−28.2	[2]53	27	427	−18.7	30	30	421	−25.6	[2]41	29	416	−27.5	[2]48	27	428	−17.9	----
8,000	30	376	−22.5	----	28	361	−34.4	----	24	358	−34.8	----	26	373	−25.3	29	30	365	−33.4	----	27	361	−34.6	----	24	376	−25.1	----
9,000	30	327	−29.5	----	25	313	−39.5	----	23	309	−41.7	----	25	324	−32.1	27	29	315	−41.1	----	27	312	−41.7	----	23	325	−32.5	----
10,000	30	284	−36.5	----	24	270	−46.3	----	21	266	−45.3	----	24	280	−38.7	----	28	272	−47.0	----	27	269	−47.8	----	23	282	−40.3	----
11,000	30	245	−44.1	----	19	233	−52.3	----	17	229	−49.8	----	24	242	−44.6	----	26	233	−51.7	----	25	231	−52.6	----	23	243	−47.0	----
12,000	30	211	−52.0	----	17	199	−54.8	----	15	196	−53.4	----	21	208	−49.9	----	25	200	−55.7	----	25	198	−54.8	----	21	209	−52.5	----
13,000	28	180	−59.4	----	15	170	−56.2	----	11	168	−55.3	----	18	178	−55.3	----	24	170	−58.2	----	24	169	−56.5	----	18	178	−57.8	----
14,000	22	154	−66.5	----	14	145	−57.5	----	6	144	−57.3	----	17	152	−60.2	----	16	144	−60.7	----	23	144	−57.7	----	18	152	−62.6	----
15,000	15	130	−72.3	----	12	123	−58.2	----	5	123	−58.2	----	16	130	−64.5	----	13	123	−62.1	----	22	123	−58.3	----	16	130	−66.8	----
16,000	13	110	−76.9	----	11	105	−58.9	----	----	----	----	----	14	110	−67.9	----	12	105	−62.7	----	18	105	−58.4	----	16	110	−69.3	----
17,000	----	----	----	----	7	89	−58.9	----	----	----	----	----	10	93	−67.3	----	----	----	----	----	8	90	−57.7	----	14	93	−69.3	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	7	78	−65.7	----	----	----	----	----	----	----	----	----	10	79	−65.0	----

Altitude (meters) m. s. l.	Lakehurst, N. J.[1] (39 m.)				Little Rock, Ark. (79 m.)				Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	23	1,011	10.3	[2]81	22	1,006	14.5	[2]69	22	1,002	27.5	[2]81	31	967	13.2	67	31	1,013	22.0	88	27	996	12.3	[2]72	28	1,015	15.4	[2]74
500	23	956	10.8	[2]68	22	957	15.4	[2]50	22	956	25.3	[2]66	31	957	13.3	66	31	957	20.8	86	27	959	14.7	[2]54	28	957	13.2	[2]64
1,000	23	901	8.5	[2]61	22	902	12.1	[2]58	22	903	23.1	[2]49	31	901	11.6	65	31	903	17.6	86	27	903	11.5	[2]58	28	902	10.5	[2]64
1,500	23	846	6.5	[2]54	22	850	9.7	[2]53	22	852	20.6	[2]40	31	849	8.4	66	31	852	15.2	77	27	851	8.7	[2]53	28	849	8.0	[2]63
2,000	22	798	4.8	[2]49	22	800	7.4	[2]45	22	804	18.1	[2]35	31	798	5.2	66	31	803	13.1	70	27	801	6.4	[2]50	28	798	5.6	[2]53
2,500	22	750	3.5	[2]43	21	752	5.3	[2]32	22	758	14.8	[2]37	31	751	2.5	63	31	757	11.2	62	27	753	4.1	[2]40	28	751	4.1	[2]42
3,000	22	705	1.2	[2]40	21	708	2.9	[2]32	22	714	11.1	[2]44	31	706	−0.2	60	31	712	9.2	52	27	708	2.1	[2]34	28	706	1.5	[2]38
4,000	20	623	−4.4	[2]31	21	625	−1.8	[2]31	20	633	4.4	[2]42	31	622	−6.1	57	30	631	4.1	45	27	625	−3.4	[2]33	28	623	−3.5	[2]23
5,000	20	548	−10.5	[2]35	20	550	−7.4	[2]23	18	559	−0.7	----	31	547	−11.9	52	30	557	−1.3	41	27	550	−9.4	[2]32	28	548	−9.6	[2]28
6,000	19	480	−17.4	----	20	483	−14.4	[2]24	17	493	−6.9	----	31	479	−18.4	50	30	491	−7.6	42	26	482	−16.0	[2]32	28	481	−15.9	[2]28
7,000	18	420	−24.5	----	20	423	−21.8	----	17	433	−13.2	----	30	418	−26.1	49	30	431	−13.9	37	23	423	−22.7	[2]37	28	421	−22.4	[2]30
8,000	13	365	−33.8	----	20	368	−28.7	----	17	379	−19.5	----	30	363	−33.3	46	30	377	−20.7	36	22	368	−30.3	----	----	----	----	----
9,000	13	316	−41.2	----	20	319	−36.2	----	17	330	−26.6	----	30	314	−40.5	----	30	328	−27.4	36	22	318	−37.2	----	----	----	----	----
10,000	11	272	−47.3	----	20	276	−43.2	----	17	287	−34.3	----	29	271	−46.7	----	29	285	−34.4	32	21	276	−43.0	----	----	----	----	----
11,000	10	234	−52.5	----	19	238	−48.9	----	17	248	−42.1	----	29	233	−51.5	----	29	246	−42.0	----	21	237	−48.4	----	----	----	----	----
12,000	10	200	−55.9	----	19	204	−54.0	----	15	214	−50.2	----	27	200	−53.8	----	29	212	−49.9	----	18	204	−52.6	----	----	----	----	----
13,000	9	170	−59.0	----	17	174	−58.3	----	15	183	−58.8	----	26	171	−55.6	----	27	182	−58.0	----	15	175	−56.8	----	----	----	----	----
14,000	8	145	−61.2	----	15	149	−62.1	----	15	156	−67.0	----	25	146	−57.3	----	23	154	−65.9	----	13	150	−60.9	----	----	----	----	----
15,000	6	124	−62.1	----	14	126	−65.5	----	15	131	−74.3	----	22	124	−58.9	----	21	131	−72.2	----	12	127	−64.5	----	----	----	----	----
16,000	----	----	----	----	13	107	−67.8	----	14	110	−79.3	----	21	106	−60.3	----	18	110	−76.0	----	8	108	−67.4	----	----	----	----	----
17,000	----	----	----	----	13	91	−66.1	----	11	93	−77.1	----	10	91	−61.4	----	13	93	−76.8	----	5	93	−66.6	----	----	----	----	----
18,000	----	----	----	----	7	77	−64.4	----	7	78	−70.7	----	8	78	−61.1	----	8	78	−72.4	----	----	----	----	----	----	----	----	----
19,000	----	----	----	----	6	65	−61.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Ely, Nev. (1938 m.)				Glasgow, Mont. (648 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	809	7.7	59	16	935	5.8	[2]69	30	885	11.0	[2]47	29	996	9.9	[2]79	31	976	6.5	[2]72	30	996	8.2	[2]82	31	1,016	17.0	[2]83
500	----	----	----	----	----	----	----	----	----	----	----	----	29	958	13.1	[2]59	31	957	8.1	[2]63	30	958	10.9	[2]61	31	959	17.6	[2]58
1,000	----	----	----	----	16	806	7.5	54	----	----	----	----	29	903	10.4	[2]60	31	901	5.9	[2]55	30	902	8.6	[2]60	31	905	14.4	[2]54
1,500	----	----	----	----	16	843	5.6	47	30	847	11.3	[2]41	29	850	7.1	[2]62	31	848	4.8	[2]52	30	849	6.0	[2]58	31	853	12.4	[2]45
2,000	30	800	8.4	37	16	793	3.2	[2]45	30	797	7.6	[2]44	29	799	4.5	[2]57	31	797	3.4	[2]42	29	799	3.9	[2]53	31	803	10.5	[2]35
2,500	30	753	7.5	51	16	745	0.7	[2]45	30	750	3.6	[2]50	29	751	1.5	[2]51	31	749	1.1	[2]37	28	751	1.8	[2]48	31	756	8.2	[2]34
3,000	30	708	3.6	53	16	700	−2.2	[2]58	30	704	−0.4	[2]57	29	706	−0.8	[2]44	31	704	−1.3	[2]35	28	705	−0.4	[2]44	31	711	5.7	[2]28
4,000	30	625	−2.9	53	16	617	−8.7	[2]53	30	621	−7.7	[2]63	27	622	−5.6	[2]35	31	620	−6.8	[2]31	27	621	−6.2	[2]38	31	629	0.1	[2]34
5,000	30	551	−9.4	52	15	542	−14.6	[2]51	30	545	−13.8	[2]60	27	547	−11.7	[2]36	31	545	−12.8	[2]37	27	546	−12.0	[2]40	31	554	−5.4	[2]27
6,000	29	483	−16.6	49	15	474	−21.3	[2]57	30	477	−20.2	[2]54	27	479	−18.3	[2]35	31	477	−19.5	[2]41	27	478	−18.6	[2]34	30	487	−11.9	----
7,000	29	422	−23.4	46	15	412	−28.3	[2]55	30	416	−27.5	[2]54	27	418	−25.7	[2]37	30	417	−26.5	[2]37	27	417	−26.0	[2]35	30	427	−18.8	----
8,000	24	368	−30.4	43	14	358	−36.0	[2]57	30	361	−35.2	----	27	363	−32.6	----	30	362	−34.0	----	27	363	−33.5	----	29	372	−26.2	----
9,000	23	319	−37.7	39	14	309	−44.4	----	30	312	−43.0	----	27	314	−39.5	----	28	313	−41.6	----	27	314	−40.3	----	28	323	−33.7	----
10,000	21	276	−44.6	----	13	264	−52.0	----	28	269	−49.5	----	26	271	−45.6	----	27	270	−48.6	----	26	271	−47.2	----	26	280	−40.0	----
11,000	19	238	−49.6	----	13	227	−55.4	----	26	231	−53.8	----	25	233	−49.7	----	27	232	−53.9	----	25	233	−51.8	----	23	242	−46.4	----
12,000	17	204	−54.0	----	13	194	−55.9	----	22	198	−56.0	----	25	200	−53.2	----	26	198	−56.3	----	24	200	−54.3	----	25	207	−52.3	----
13,000	14	173	−57.7	----	13	166	−55.5	----	17	169	−55.8	----	23	171	−55.9	----	24	169	−57.4	----	24	171	−55.7	----	23	177	−57.8	----
14,000	6	146	−59.8	----	13	142	−55.2	----	16	145	−56.7	----	21	146	−59.0	----	24	144	−58.1	----	23	146	−57.4	----	17	151	−62.8	----
15,000	5	125	−60.2	----	11	121	−56.2	----	14	123	−57.1	----	18	124	−61.0	----	20	123	−58.4	----	17	124	−58.7	----	15	128	−67.1	----
16,000	----	----	----	----	7	104	−56.7	----	13	106	−57.8	----	17	106	−62.4	----	15	105	−58.4	----	11	106	−60.4	----	10	109	−69.2	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	6	91	−63.2	----	6	90	−58.9	----	6	91	−61.1	----	5	93	−68.2	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	77	−59.9	----	----	----	----	----

[1] U. S. Navy

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during October 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Oakland, Calif. (2 m.)				Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[4] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,014	15.6	[2]77	17	861	8.6	[2]60	31	970	14.7	[2]64	31	981	10.4	[2]65	----	----	----	----	28	972	19.3	51	22	968	8.5	76
500	31	956	15.2	[2]60	----	----	----	----	31	958	15.6	[2]57	31	959	11.8	[2]51	----	----	----	----	28	955	23.7	33	22	955	8.4	76
1,000	31	901	13.6	[2]48	----	----	----	----	31	903	14.5	[2]53	31	903	9.9	[2]50	----	----	----	----	28	901	22.6	27	22	899	6.7	73
1,500	31	849	11.4	[2]40	17	847	9.7	[2]53	31	852	12.1	[2]53	31	850	7.3	[2]49	----	----	----	----	28	851	18.6	31	22	846	4.4	73
2,000	31	799	9.0	[2]38	17	797	7.2	[2]48	31	801	9.7	[2]42	31	799	5.8	[2]36	----	----	----	----	28	802	14.5	34	22	795	2.6	68
2,500	31	752	6.5	[2]33	17	749	3.0	[2]55	31	754	7.2	[2]34	31	752	3.5	[2]34	----	----	----	----	28	755	10.8	35	22	747	0.7	64
3,000	31	707	3.4	[2]30	17	704	−1.0	[2]60	31	710	4.3	[2]33	31	707	0.9	[2]31	----	----	----	----	28	711	7.5	36	22	702	−1.1	55
4,000	30	624	−3.1	[2]27	17	620	−8.4	[2]69	26	627	−1.6	[2]28	31	623	−4.9	[2]34	----	----	----	----	27	629	0.7	34	22	619	−6.1	50
5,000	29	549	−9.5	[2]24	17	544	−14.9	[2]58	23	552	−8.3	[2]33	31	548	−11.4	[2]35	----	----	----	----	27	554	−5.5	29	22	544	−11.5	35
6,000	29	482	−16.4	----	17	476	−21.4	[2]52	20	485	−15.2	[2]35	30	480	−18.7	[2]36	----	----	----	----	27	488	−12.3	25	22	476	−18.1	35
7,000	28	421	−24.3	----	17	415	−28.3	----	18	424	−22.2	[2]36	30	419	−26.0	[2]38	----	----	----	----	25	427	−19.6	23	22	416	−25.5	37
8,000	27	366	−32.1	----	17	360	−36.2	----	17	369	−29.2	----	30	364	−33.6	----	----	----	----	----	25	372	−27.4	----	22	361	−32.1	----
9,000	26	317	−39.4	----	17	311	−43.5	----	17	320	−36.7	----	30	315	−40.6	----	----	----	----	----	24	323	−35.0	----	22	313	−38.5	----
10,000	25	273	−45.2	----	16	268	−49.2	----	16	277	−43.4	----	30	272	−46.5	----	----	----	----	----	24	280	−42.0	----	22	270	−44.4	----
11,000	19	236	−50.6	----	15	230	−53.8	----	14	239	−48.6	----	29	233	−51.5	----	----	----	----	----	22	241	−48.6	----	22	232	−48.8	----
12,000	15	202	−55.7	----	12	199	−57.6	----	14	205	−53.3	----	28	200	−54.2	----	----	----	----	----	19	206	−54.9	----	21	199	−52.1	----
13,000	13	173	−58.4	----	12	169	−59.1	----	14	175	−57.2	----	25	171	−56.5	----	----	----	----	----	17	176	−58.5	----	18	171	−55.4	----
14,000	9	148	−61.6	----	10	144	−60.3	----	12	150	−60.2	----	21	146	−58.3	----	----	----	----	----	11	150	−61.5	----	18	146	−57.5	----
15,000	7	126	−63.4	----	7	123	−61.9	----	11	127	−63.9	----	17	124	−59.9	----	----	----	----	----	10	128	−63.9	----	15	125	−60.8	----
16,000	5	108	−66.4	----	----	----	----	----	11	108	−65.9	----	14	106	−60.0	----	----	----	----	----	8	109	−66.1	----	14	107	−61.0	----
17,000	5	91	−65.4	----	----	----	----	----	7	91	−67.3	----	7	91	−60.4	----	----	----	----	----	----	----	----	----	9	91	−60.7	----

Altitude (meters) m. s. l.	Portland, Maine (20 m.)				Rapid City, S. Dak. (981 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,012	7.6	86	26	901	7.6	[2]55	30	996	13.1	[2]71	31	990	8.2	[2]73	28	989	18.4	[2]72	30	1,010	18.2	[2]83	28	1,011	25.6	[2]88
500	31	955	7.9	80	----	----	----	----	30	958	13.7	[2]59	31	958	10.1	[2]57	28	960	18.6	[2]58	30	956	17.8	[2]68	28	957	22.7	[2]85
1,000	31	899	5.5	77	26	900	7.9	[2]54	30	903	10.6	[2]60	31	902	7.5	[2]57	28	905	15.4	[2]58	30	901	17.9	[2]45	28	904	19.8	[2]80
1,500	31	846	3.3	76	26	848	9.4	[2]48	30	850	7.3	[2]64	31	849	5.7	[2]51	28	854	12.5	[2]59	30	850	15.7	[2]35	28	853	17.3	[2]73
2,000	31	794	1.4	75	26	797	6.4	[2]49	30	800	5.0	[2]65	31	798	3.8	[2]44	28	803	10.4	[2]44	30	801	13.4	[2]29	28	804	14.8	[2]65
2,500	31	746	−0.5	70	26	750	3.3	[2]50	30	752	3.3	[2]45	31	750	2.0	[2]35	28	756	8.3	[2]35	30	755	10.5	[2]26	28	758	12.5	[2]54
3,000	30	701	−2.3	62	26	705	0.2	[2]46	30	707	0.9	[2]40	31	705	0.2	[2]31	28	712	5.7	[2]33	30	710	7.2	[2]28	28	713	10.0	[2]48
4,000	29	618	−6.6	54	26	621	−6.5	[2]46	30	624	−4.3	[2]42	30	622	−5.4	[2]26	28	629	−0.3	[2]33	30	628	1.0	[2]35	27	632	4.1	[2]46
5,000	27	544	−12.2	53	26	545	−12.9	[2]40	30	548	−10.4	[2]42	30	547	−11.5	[2]26	28	554	−5.7	[2]29	30	554	−5.1	----	27	558	−1.5	[2]46
6,000	27	476	−18.1	49	26	477	−19.5	[2]40	30	481	−17.1	[2]49	30	479	−18.6	[2]32	28	487	−12.2	----	30	487	−12.1	----	27	492	−7.1	[2]40
7,000	27	416	−24.7	47	26	416	−26.5	[2]43	28	420	−24.3	[2]58	30	418	−26.1	[2]37	28	427	−19.3	----	29	427	−19.2	----	27	432	−13.1	[2]34
8,000	25	362	−31.6	40	26	362	−34.5	----	28	365	−32.0	----	28	364	−33.7	----	28	372	−26.6	----	12	374	−26.5	----	24	378	−19.5	[2]31
9,000	21	315	−37.5	40	26	313	−42.5	----	27	316	−39.6	----	27	314	−41.4	----	28	323	−33.7	----	12	324	−34.4	----	23	330	−27.0	----
10,000	19	272	−43.0	----	25	269	−49.1	----	27	273	−46.4	----	26	271	−48.2	----	28	280	−40.3	----	12	280	−42.4	----	23	287	−35.0	----
11,000	17	234	−48.6	----	20	231	−53.6	----	26	235	−52.0	----	26	232	−52.9	----	28	241	−46.5	----	12	241	−48.7	----	23	247	−43.1	----
12,000	17	201	−52.6	----	19	197	−55.2	----	23	201	−55.0	----	25	199	−55.4	----	28	207	−52.9	----	12	206	−54.3	----	21	213	−51.5	----
13,000	14	171	−55.3	----	15	169	−56.9	----	22	172	−57.3	----	24	170	−56.3	----	27	177	−59.4	----	10	176	−59.1	----	19	182	−59.9	----
14,000	13	146	−57.0	----	8	146	−58.8	----	21	146	−59.5	----	23	145	−57.5	----	26	150	−65.4	----	9	151	−63.0	----	19	154	−67.7	----
15,000	11	125	−59.2	----	5	125	−61.0	----	18	125	−61.7	----	21	124	−58.1	----	22	128	−69.8	----	9	128	−66.1	----	18	131	−73.4	----
16,000	9	106	−60.0	----	----	----	----	----	16	107	−62.4	----	16	106	−58.9	----	18	108	−71.6	----	8	109	−68.6	----	17	110	−76.6	----
17,000	6	90	−59.5	----	----	----	----	----	10	91	−62.8	----	10	91	−59.3	----	10	91	−70.0	----	----	----	----	----	14	93	−75.3	----
18,000	----	----	----	----	----	----	----	----	5	78	−61.2	----	6	77	−58.2	----	7	78	−66.0	----	----	----	----	----	10	78	−71.8	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	66	−63.7	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Santa Maria, Calif. (73 m.)				Sault Ste. Marie, Mich. (22 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies[3] (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa,[3] Fla. (3 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,006	13.8	[2]87	31	991	5.5	81	24	1,010	13.9	[2]75	30	944	10.0	[2]75	----	----	----	----	31	775	14.6	[2]64	----	----	----	----
500	31	957	16.5	[2]59	31	958	6.2	76	24	954	11.5	[2]73	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1,000	31	902	16.7	[2]39	31	901	4.0	72	24	899	8.8	[2]73	30	900	10.2	[2]65	----	----	----	----	----	----	----	----	----	----	----	----
1,500	31	850	14.4	[2]34	31	847	2.6	70	24	846	5.8	[2]74	30	847	7.4	[2]66	----	----	----	----	----	----	----	----	----	----	----	----
2,000	31	801	11.7	[2]30	31	796	1.4	67	24	795	3.1	[2]72	30	796	4.2	[2]60	----	----	----	----	----	----	----	----	----	----	----	----
2,500	31	754	8.7	[2]33	31	748	−0.3	63	22	748	0.5	[2]67	30	749	0.7	[2]63	----	----	----	----	31	756	13.8	[2]66	----	----	----	----
3,000	30	709	5.6	[2]34	31	702	−2.2	59	22	702	−2.5	[2]66	29	704	−2.3	[2]66	----	----	----	----	31	713	10.9	[2]70	----	----	----	----
4,000	30	627	0.0	[2]28	29	619	−7.3	50	22	618	−8.4	[2]66	28	620	−8.4	[2]61	----	----	----	----	31	632	5.3	[2]79	----	----	----	----
5,000	30	553	−6.2	[2]24	25	544	−12.9	46	22	543	−15.0	[2]63	28	544	−14.9	[2]63	----	----	----	----	31	559	0.0	[2]79	----	----	----	----
6,000	30	486	−13.1	[2]23	22	477	−19.4	43	21	475	−21.6	[2]61	28	476	−21.6	----	----	----	----	----	30	493	−4.7	[2]65	----	----	----	----
7,000	30	426	−20.5	----	18	419	−25.2	44	21	415	−29.0	[2]65	28	415	−28.8	----	----	----	----	----	30	433	−11.0	[2]54	----	----	----	----
8,000	29	371	−28.2	----	16	364	−32.3	40	15	362	−34.9	----	28	359	−32.1	----	----	----	----	----	30	380	−17.4	[2]51	----	----	----	----
9,000	29	321	−35.7	----	14	316	−39.8	----	15	313	−42.4	----	28	310	−43.0	----	----	----	----	----	30	332	−23.9	[2]50	----	----	----	----
10,000	26	279	−42.6	----	14	272	−47.0	----	14	268	−48.9	----	27	267	−48.7	----	----	----	----	----	29	289	−31.0	[2]49	----	----	----	----
11,000	26	240	−49.2	----	14	234	−52.8	----	11	232	−54.3	----	26	230	−52.8	----	----	----	----	----	28	250	−38.8	----	----	----	----	----
12,000	21	206	−54.8	----	13	201	−56.4	----	11	198	−58.4	----	25	197	−54.6	----	----	----	----	----	26	216	−46.9	----	----	----	----	----
13,000	18	177	−58.6	----	11	172	−58.7	----	9	167	−59.5	----	21	168	−54.9	----	----	----	----	----	24	185	−55.3	----	----	----	----	----
14,000	13	151	−62.3	----	10	146	−59.4	----	----	----	----	----	17	144	−56.3	----	----	----	----	----	22	158	−63.4	----	----	----	----	----
15,000	12	123	−65.4	----	10	124	−60.5	----	----	----	----	----	14	123	−57.3	----	----	----	----	----	20	134	−71.0	----	----	----	----	----
16,000	10	109	−66.6	----	9	106	−60.5	----	----	----	----	----	8	106	−58.4	----	----	----	----	----	18	113	−77.2	----	----	----	----	----
17,000	5	94	−65.9	----	7	91	−61.0	----	----	----	----	----	----	----	----	----	----	----	----	----	12	95	−81.0	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	80	−79.5	----	----	----	----	----

[1] U. S. Navy. [2] Humidity data obtained by electric hygrometer. [3] Insufficient data. [4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during October 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Tapachula, Mex. (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	997	24.1	[2] 90	29	1,009	11.3	[2] 86	21	1,013	13.0	[2] 84	31	1,013	12.6	[2] 69
500	31	954	23.7	[2] 87	29	954	10.1	[2] 76	21	957	10.3	[2] 79	31	957	11.1	[2] 62
1,000	31	901	21.0	[2] 86	29	898	7.7	[2] 66	21	901	8.3	[2] 71	31	902	8.6	[2] 64
1,500	31	851	18.5	[2] 84	29	845	4.8	[2] 63	21	848	5.8	[2] 68	31	849	6.3	[2] 67
2,000	31	802	15.9	[2] 82	29	794	2.1	[2] 60	21	797	3.1	[2] 69	31	798	4.3	[2] 61
2,500	31	756	13.4	[2] 78	29	746	−0.5	[2] 53	21	749	0.1	[2] 65	31	750	2.5	[2] 61
3,000	31	712	10.8	[2] 75	28	701	−3.3	[2] 48	21	704	−2.8	[2] 56	31	705	0.6	[2] 42
4,000	31	632	5.4	[2] 73	28	617	−9.4	[2] 43	21	620	−7.9	[2] 42	31	622	−4.8	[2] 43
5,000	29	559	0.2	[2] 67	28	542	−15.9	[2] 45	21	544	−13.7	[2] 43	30	547	−10.3	[2] 40
6,000	28	492	−5.4	[2] 62	28	474	−22.7	[2] 50	21	476	−19.8	[2] 43	30	480	−17.0	[2] 43
7,000	27	433	−11.3	[2] 58	27	412	−29.7	[2] 55	18	416	−26.5	[2] 49	30	419	−24.0	[2] 42
8,000	24	380	−18.0	[2] 53	24	357	−36.9	----	12	358	−35.9	----	29	364	−31.2	----
9,000	24	331	−25.1	[2] 45	24	308	−43.2	----	12	309	−42.2	----	29	315	−37.6	----
10,000	22	288	−32.9	----	24	265	−49.1	----	10	268	−47.6	----	29	272	−44.0	----
11,000	21	249	−41.0	----	22	228	−52.2	----	10	230	−51.1	----	27	234	−49.2	----
12,000	18	215	−49.6	----	21	195	−52.8	----	7	197	−52.4	----	20	201	−52.4	----
13,000	15	184	−58.9	----	17	167	−54.3	----	----	----	----	----	14	172	−55.7	----
14,000	14	156	−67.9	----	15	143	−56.3	----	----	----	----	----	11	147	−59.2	----
15,000	9	132	−75.8	----	14	122	−57.1	----	----	----	----	----	10	126	−61.3	----
16,000	8	111	−82.1	----	7	104	−56.9	----	----	----	----	----	7	107	−62.2	----
17,000	7	93	−83.3	----	----	----	----	----	----	----	----	----	6	91	−62.3	----

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by airplanes and radiosondes during November 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	1,008	1.4	[2] 79	30	842	8.0	[2] 36	30	1,021	13.0	[2] 72	29	986	8.2	[2] 65	30	932	10.6	[2] 53	30	961	−1.6	87	29	923	3.4	[2] 77
500	29	957	1.1	[2] 70	----	----	----	----	30	993	14.9	[2] 44	29	953	10.5	[2] 57	----	----	----	----	----	----	----	----	----	----	----	----
1,000	29	899	−1.8	[2] 74	----	----	----	----	30	908	12.0	[2] 43	29	907	8.8	[2] 51	30	908	12.4	[2] 49	30	903	−1.7	81	29	909	5.1	[2] 67
1,500	29	844	−3.8	[2] 72	----	----	----	----	30	855	10.5	[2] 34	29	854	7.1	[2] 49	30	856	10.2	[2] 46	30	848	−1.5	71	29	855	4.9	[2] 50
2,000	29	792	−5.5	[2] 65	30	804	8.5	[2] 33	30	805	8.7	[2] 26	29	803	5.4	[2] 42	30	805	7.6	[2] 43	30	796	−2.5	63	29	803	3.5	[2] 43
2,500	29	743	−7.7	[2] 59	30	756	5.6	[2] 32	30	757	6.9	[2] 28	29	755	3.4	[2] 43	30	757	5.4	[2] 39	30	748	−4.1	58	29	755	1.9	[2] 39
3,000	29	697	−9.6	[2] 55	30	711	2.5	[2] 35	30	712	4.1	[2] 32	29	710	1.1	[2] 38	30	712	3.0	[2] 34	30	701	−6.4	55	29	709	−0.7	[2] 40
4,000	29	611	−14.5	[2] 46	30	628	−4.5	[2] 41	30	629	−1.2	[2] 33	29	626	−4.3	[2] 35	30	628	−3.4	[2] 26	30	616	−11.5	52	29	625	−7.0	[2] 45
5,000	28	534	−20.4	[2] 43	30	552	−10.7	[2] 34	29	535	−7.6	[2] 30	28	551	−10.3	[2] 34	30	553	−10.3	[2] 29	29	540	−17.9	51	29	549	−13.0	[2] 46
6,000	28	466	−27.0	[2] 50	29	484	−17.7	[2] 29	29	487	−14.3	[2] 34	27	483	−17.1	[2] 36	29	484	−16.9	[2] 28	29	472	−24.3	53	28	481	−19.7	[2] 46
7,000	24	406	−32.9	[2] 56	28	423	−24.8	----	27	426	−21.5	----	26	422	−24.2	[2] 35	29	423	−24.2	[2] 30	27	411	−30.9	51	28	420	−26.8	[2] 49
8,000	21	352	−39.4	----	27	368	−32.5	----	26	371	−28.7	----	26	367	−31.7	[2] 39	29	368	−31.8	[2] 36	26	356	−38.5	54	28	364	−34.1	[2] 52
9,000	15	305	−44.3	----	26	318	−40.2	----	24	322	−36.2	----	24	317	−39.5	----	24	319	−39.1	----	26	307	−45.8	----	23	314	−42.1	----
10,000	9	263	−49.6	----	23	275	−47.0	----	20	278	−43.4	----	24	274	−47.0	----	21	276	−46.1	----	23	264	−51.8	----	18	272	−49.2	----
11,000	----	----	----	----	20	236	−52.5	----	19	239	−49.9	----	22	235	−52.7	----	15	236	−52.8	----	22	226	−55.9	----	16	233	−55.2	----
12,000	----	----	----	----	15	203	−57.4	----	18	205	−55.1	----	20	201	−56.6	----	13	202	−56.8	----	22	193	−57.3	----	11	198	−60.9	----
13,000	----	----	----	----	14	173	−59.6	----	15	175	−59.0	----	15	172	−59.1	----	9	173	−60.7	----	21	165	−56.8	----	6	167	−60.2	----
14,000	----	----	----	----	10	147	−62.0	----	12	149	−62.5	----	13	147	−61.7	----	8	148	−63.1	----	19	141	−56.9	----	----	----	----	----
15,000	----	----	----	----	9	125	−64.4	----	8	127	−65.1	----	12	125	−64.8	----	7	126	−65.6	----	14	120	−57.8	----	----	----	----	----
16,000	----	----	----	----	6	106	−65.1	----	6	108	−67.0	----	11	107	−65.2	----	6	106	−67.9	----	7	102	−68.6	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	90	−66.5	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				Dodge City, Kans. (787 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,020	17.1	[2] 87	30	992	2.3	[2] 80	29	993	−2.2	[2] 90	30	1,020	8.1	87	30	842	1.4	[2] 58	30	993	0.9	[2] 82	23	930	3.4	[2] 62
500	30	963	16.7	[2] 72	30	959	1.3	[2] 77	29	955	−2.6	[2] 85	30	961	12.0	59	----	----	----	----	30	958	1.0	[2] 72	----	----	----	----
1,000	30	908	13.8	[2] 71	30	901	−1.0	[2] 70	29	897	−4.7	[2] 78	30	906	9.8	55	----	----	----	----	30	900	−1.5	[2] 70	23	907	8.1	[2] 47
1,500	30	856	11.1	[2] 62	30	846	−3.7	[2] 67	29	841	−6.5	[2] 74	30	853	7.8	55	----	----	----	----	30	845	−3.8	[2] 65	23	854	8.3	[2] 41
2,000	30	806	8.9	[2] 53	30	793	−6.1	[2] 69	29	789	−8.4	[2] 71	30	802	6.6	50	30	803	5.6	[2] 39	30	793	−5.5	[2] 57	23	803	6.1	[2] 41
2,500	30	758	6.7	[2] 46	30	744	−8.6	[2] 63	29	739	−10.5	[2] 62	30	754	4.3	47	30	754	3.0	[2] 39	30	744	−7.1	[2] 51	23	755	3.5	[2] 39
3,000	30	714	4.5	[2] 42	30	697	−10.7	[2] 56	29	693	−12.3	[2] 61	30	709	2.2	43	30	709	−0.1	[2] 41	30	698	−9.2	[2] 52	23	710	1.1	[2] 35
4,000	30	630	−0.6	[2] 32	29	612	−14.9	[2] 52	27	607	−16.4	[2] 52	30	626	−3.2	37	30	625	−7.2	[2] 49	30	612	−14.5	[2] 50	23	626	−4.9	[2] 34
5,000	30	556	−6.5	[2] 26	29	536	−20.3	[2] 47	26	531	−22.6	[2] 61	29	551	−9.3	32	30	549	−14.1	[2] 47	29	536	−20.2	[2] 54	23	550	−11.9	[2] 40
6,000	29	488	−12.6	[2] 25	29	468	−26.7	[2] 46	24	463	−29.0	[2] 63	28	484	−16.0	30	30	481	−20.8	[2] 42	29	468	−26.6	[2] 48	23	482	−18.8	[2] 39
7,000	29	428	−19.8	[2] 28	29	406	−33.1	[2] 45	22	402	−35.0	[2] 63	27	423	−22.9	30	30	419	−28.5	[2] 41	29	406	−33.3	[2] 56	23	421	−26.0	[2] 36
8,000	29	373	−27.2	[2] 38	28	351	−39.0	----	20	347	−41.3	----	25	369	−30.0	33	29	363	−36.7	----	29	351	−40.3	----	23	365	−33.8	[2] 42
9,000	29	324	−34.5	----	24	302	−44.7	----	16	300	−47.2	----	25	320	−37.5	38	26	312	−44.2	----	28	302	−46.7	----	23	315	−41.4	----
10,000	29	280	−41.7	----	18	262	−49.6	----	9	259	−49.1	----	24	276	−44.6	----	26	269	−51.3	----	25	259	−51.8	----	22	272	−48.9	----
11,000	28	241	−48.6	----	11	227	−54.6	----	6	222	−51.1	----	24	237	−50.7	----	22	230	−57.1	----	24	222	−54.8	----	21	233	−55.4	----
12,000	25	207	−55.2	----	----	----	----	----	----	----	----	----	23	203	−54.9	----	22	196	−60.4	----	23	190	−55.7	----	20	200	−59.1	----
13,000	25	177	−61.2	----	----	----	----	----	----	----	----	----	23	173	−58.7	----	16	167	−61.3	----	22	162	−56.6	----	19	170	−60.9	----
14,000	24	150	−66.3	----	----	----	----	----	----	----	----	----	23	148	−62.0	----	8	142	−62.8	----	22	138	−57.3	----	19	144	−61.9	----
15,000	24	127	−69.8	----	----	----	----	----	----	----	----	----	22	125	−64.5	----	----	----	----	----	18	118	−58.1	----	16	123	−63.5	----
16,000	21	107	−72.0	----	----	----	----	----	----	----	----	----	18	107	−66.3	----	----	----	----	----	12	100	−67.6	----	14	105	−64.8	----
17,000	12	90	−72.1	----	----	----	----	----	----	----	----	----	16	90	−66.1	----	----	----	----	----	8	87	−68.1	----	7	90	−66.8	----
18,000	6	77	−70.7	----	----	----	----	----	----	----	----	----	11	76	−67.1	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during November 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	El Paso, Tex. (1,195 m.)				Ely, Nev. (1,908 m.)				Glasgow, Mont. (648 m.)				Great Falls, Mont. (1,128 m.)				Greensboro, N. C. (273 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	886	9.5	[2]41	30	813	0.3	59	30	944	0.4	[2]77	30	890	5.1	[2]53	16	988	5.5	54	29	1,001	3.0	[2]80	29	977	−3.4	[2]84
500																	16	961	8.6	39	29	961	5.2	[2]63	29	958	−4.1	[2]83
1,000									30	904	2.5	[2]59					16	905	6.6	38	29	904	2.6	[2]63	29	899	−6.2	[2]78
1,500	30	854	12.0	[2]35					30	850	1.1	[2]51	30	851	5.6	[2]43	16	851	4.6	38	29	850	0.3	[2]60	29	844	−7.7	[2]71
2,000	30	804	9.4	[2]34	30	804	2.0	58	30	798	−0.8	[2]49	30	800	2.5	[2]45	16	800	2.5	43	29	798	−1.8	[2]54	29	791	−8.3	[2]69
2,500	30	757	6.1	[2]34	30	856	3.3	56	30	749	−3.2	[2]52	30	751	−0.8	[2]49	16	752	0.2	42	29	749	−3.5	[2]45	29	741	−10.0	[2]50
3,000	30	712	3.0	[2]32	30	710	0.6	54	30	703	−5.4	[2]53	30	706	−3.3	[2]50	16	706	−2.2	39	29	703	−5.5	[2]43	29	694	−12.4	[2]46
4,000	30	628	−2.7	[2]31	30	626	−4.4	47	30	618	−11.2	[2]49	30	621	−9.4	[2]57	16	622	−7.6	24	29	618	−10.0	[2]35	29	609	−17.3	[2]41
5,000	25	553	−9.1	[2]27	30	551	−10.5	43	29	542	−16.9	[2]44	30	545	−15.6	[2]57	16	546	−12.9	----	29	543	−15.6	[2]35	29	532	−22.5	[2]36
6,000	25	486	−16.0	[2]28	30	483	−17.2	42	27	474	−23.6	[2]47	29	476	−22.6	[2]58	16	478	−19.9	----	29	474	−22.3	[2]30	27	463	−29.2	[2]41
7,000	24	424	−23.6	----	29	422	−24.6	39	27	412	−31.0	[2]47	29	415	−29.6	[2]59	15	416	−27.4	----	29	413	−29.0	[2]37	26	401	−35.8	----
8,000	22	369	−31.3	----	28	367	−32.6	38	26	356	−38.8	[2]49	28	360	−37.1	----	14	362	−34.9	----	29	358	−36.2	----	23	346	−43.4	----
9,000	22	320	−38.4	----	28	317	−40.4	----	25	307	−46.6	----	27	310	−44.4	----	13	313	−42.8	----	29	309	−43.3	----	21	297	−49.3	----
10,000	18	276	−44.9	----	27	274	−46.7	----	25	264	−52.4	----	23	267	−51.0	----	13	269	−49.6	----	28	266	−49.7	----	20	255	−52.1	----
11,000	17	238	−51.4	----	24	235	−52.6	----	25	226	−57.1	----	20	230	−56.9	----	11	231	−55.9	----	27	228	−55.6	----	16	219	−52.5	----
12,000	17	203	−56.0	----	24	201	−56.7	----	24	193	−58.4	----	19	196	−60.6	----	9	198	−59.5	----	25	195	−57.8	----	16	187	−53.1	----
13,000	16	173	−59.6	----	23	171	−58.8	----	22	164	−58.2	----	18	167	−60.9	----	9	168	−60.5	----	25	166	−59.0	----	14	161	−53.9	----
14,000	15	148	−62.2	----	19	146	−61.2	----	18	140	−58.2	----	13	142	−59.8	----	9	143	−62.1	----	22	142	−60.6	----	10	137	−53.8	----
15,000	12	125	−65.4	----	15	125	−63.5	----	15	120	−59.9	----	13	121	−59.8	----	6	122	−64.4	----	17	121	−61.8	----	9	119	−54.4	----
16,000	11	106	−66.4	----	10	106	−64.5	----	10	102	−60.7	----	9	104	−60.1	----					14	103	−61.7	----				
17,000	7	90	−67.3	----	5	91	−65.7	----					8	88	−60.1	----					9	87	−61.3	----				

	Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Little Rock, Ark. (79 m.)				Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)			
Surface	28	999	−0.3	[2]85	29	1,023	11.1	[2]80	26	1,014	5.0	[2]71	30	1,013	8.2	[2]72	28	1,005	24.7	[2]79	30	972	7.0	85	30	1,018	19.7	86
500	28	960	+1.5	[2]71	29	964	12.8	[2]49	26	959	4.1	[2]61	30	963	10.2	[2]49	28	958	23.3	[2]55	30	962	7.8	81	30	962	18.6	83
1,000	28	902	−0.3	[2]64	29	909	10.3	[2]44	26	901	1.3	[2]63	30	907	7.4	[2]49	28	905	20.8	[2]46	30	906	9.5	66	30	907	15.3	85
1,500	28	847	−1.4	[2]52	29	856	8.4	[2]43	26	847	−1.0	[2]63	30	854	5.9	[2]42	28	854	17.8	[2]39	30	853	8.5	57	30	855	12.7	83
2,000	28	795	−3.0	[2]46	29	805	6.9	[2]35	25	795	−3.3	[2]59	30	802	4.4	[2]37	28	805	15.0	[2]33	30	802	6.0	54	30	805	10.9	72
2,500	28	746	−4.7	[2]39	29	757	4.6	[2]36	25	746	−5.3	[2]52	30	754	2.7	[2]32	28	758	11.8	[2]27	30	755	3.4	50	30	758	8.8	63
3,000	28	700	−6.4	[2]38	29	712	2.3	[2]33	25	700	−6.9	[2]43	30	709	0.2	[2]34	28	715	8.5	[2]29	30	709	0.6	48	30	714	6.3	57
4,000	28	615	−11.4	[2]45	29	628	−3.0	[2]27	25	615	−11.9	[2]44	29	625	−5.9	[2]36	25	632	2.5	[2]20	30	625	−5.0	42	30	631	1.0	53
5,000	28	540	−16.8	[2]45	29	553	−9.7	[2]28	24	539	−18.2	[2]41	29	549	−12.0	[2]29	24	558	−3.3	[2]22	29	550	−11.2	40	30	557	−4.3	48
6,000	27	472	−23.7	[2]49	29	485	−16.5	----	24	471	−24.2	[2]42	29	481	−18.5	[2]29	23	491	−9.3	[2]28	28	482	−18.1	42	30	490	−10.7	44
7,000	26	411	−30.3	[2]51	29	424	−23.6	----	23	410	−30.5	----	29	420	−25.8	[2]36	23	431	−16.2	----	28	421	−25.2	42	30	430	−17.9	41
8,000	26	356	−37.4	----	29	369	−30.8	----	23	355	−37.0	----	29	365	−33.2	----	23	376	−24.0	----	26	366	−32.6	39	30	375	−24.9	39
9,000	26	307	−44.8	----	28	319	−38.4	----	21	307	−44.2	----	27	316	−40.7	----	22	327	−31.9	----	23	317	−39.7	38	30	326	−31.8	40
10,000	26	264	−51.4	----	25	276	−45.3	----	20	263	−50.5	----	26	272	−48.6	----	22	284	−39.3	----	17	273	−46.9	----	30	282	−38.8	----
11,000	26	227	−56.0	----	17	237	−51.4	----	19	227	−54.4	----	25	233	−55.4	----	22	244	−47.0	----	14	235	−53.7	----	26	244	−44.8	----
12,000	25	194	−58.0	----	15	203	−55.9	----	13	192	−57.7	----	25	199	−59.1	----	21	210	−54.5	----	13	201	−59.5	----	23	210	−52.2	----
13,000	22	165	−58.1	----	14	173	−59.5	----	13	164	−58.4	----	20	170	−60.8	----	21	180	−60.8	----	12	171	−60.8	----	18	180	−59.0	----
14,000	17	141	−58.8	----	12	148	−62.8	----	10	140	−59.2	----	18	144	−63.3	----	20	152	−66.8	----	11	146	−62.2	----	16	153	−65.3	----
15,000	16	120	−60.0	----	12	125	−66.0	----	6	120	−59.9	----	14	123	−64.6	----	19	129	−70.9	----	10	124	−63.1	----	13	130	−70.1	----
16,000	13	102	−60.7	----	12	107	−67.1	----					9	105	−65.6	----	15	109	−73.3	----	9	105	−63.9	----	9	110	−74.3	----
17,000	6	88	−60.3	----	6	90	−66.2	----					6	89	−65.8	----	13	92	−73.5	----	7	89	−63.4	----	7	92	−76.0	----
18,000																	10	77	−71.4	----								
19,000																	6	66	−69.0	----								

	Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (2 m.)				Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[4] (24 m.)			
Surface	30	1,001	6.8	[2]67	26	1,020	10.5	[2]74	30	1,019	13.1	[2]77	30	870	3.4	[2]72	27	976	8.0	[2]57	30	986	1.8	[2]75	----	----	----	----
500	30	962	7.6	[2]55	26	960	9.8	[2]60	30	960	13.6	[2]55	----	----	----	----	27	963	9.3	[2]51	30	962	2.8	[2]67	----	----	----	----
1,000	30	906	5.2	[2]54	26	905	7.5	[2]57	30	905	11.9	[2]44					27	907	9.2	[2]45	30	904	1.6	[2]55	----	----	----	----
1,500	30	852	3.1	[2]50	26	851	4.9	[2]57	30	852	9.7	[2]39	30	855	5.5	[2]57	27	854	7.1	[2]48	30	850	0.8	[2]46	----	----	----	----
2,000	30	800	1.9	[2]44	26	800	2.5	[2]48	30	802	7.6	[2]34	30	804	4.1	[2]45	27	803	5.4	[2]48	30	798	−0.3	[2]39	----	----	----	----
2,500	30	753	0.3	[2]38	26	752	0.8	[2]39	30	754	5.0	[2]33	30	756	1.4	[2]42	26	755	3.6	[2]40	30	749	−1.9	[2]37	----	----	----	----
3,000	30	707	−1.8	[2]38	26	706	−1.2	[2]37	30	709	1.9	[2]34	30	710	−1.1	[2]42	26	710	1.1	[2]34	30	704	−4.0	[2]40	----	----	----	----
4,000	30	623	−6.7	[2]38	26	623	−6.8	[2]35	30	626	−4.0	[2]33	30	626	−7.1	[2]47	25	626	−4.9	[2]33	30	619	−9.5	[2]39	----	----	----	----
5,000	29	547	−13.1	[2]35	25	547	−13.0	[2]31	30	550	−10.5	[2]33	30	550	−13.2	[2]43	24	550	−11.4	[2]29	29	543	−15.7	[2]36	----	----	----	----
6,000	29	479	−19.9	[2]33	25	479	−19.7	[2]29	30	482	−17.3	[2]37	30	481	−19.8	[2]43	23	482	−18.4	[2]31	29	475	−22.6	[2]39	----	----	----	----
7,000	29	418	−27.2	[2]38	24	418	−27.2	[2]29	30	422	−24.2	[2]42	30	420	−27.2	[2]49	23	421	−26.0	[2]40	29	413	−29.9	[2]40	----	----	----	----
8,000	27	362	−34.8	----	----	----	----	----	29	366	−31.3	[2]29	30	365	−34.8	----	22	365	−34.0	----	29	358	−37.3	----	----	----	----	----
9,000	27	313	−41.8	----	----	----	----	----	28	317	−39.0	----	28	315	−42.7	----	22	315	−41.3	----	28	309	−44.4	----	----	----	----	----
10,000	26	270	−48.8	----	----	----	----	----	28	274	−46.9	----	28	272	−50.1	----	21	272	−48.3	----	27	266	−50.8	----	----	----	----	----
11,000	25	232	−55.0	----	----	----	----	----	28	235	−53.7	----	28	232	−56.2	----	21	233	−54.5	----	25	228	−56.7	----	----	----	----	----
12,000	22	196	−58.6	----	----	----	----	----	26	201	−58.7	----	24	196	−59.3	----	19	200	−57.1	----	24	195	−58.2	----	----	----	----	----
13,000	20	169	−60.0	----	----	----	----	----	23	171	−61.2	----	21	169	−60.2	----	19	170	−59.2	----	20	166	−59.4	----	----	----	----	----
14,000	18	144	−62.1	----	----	----	----	----	20	146	−64.7	----	19	144	−61.6	----	17	145	−60.8	----	18	141	−60.2	----	----	----	----	----
15,000	13	122	−63.6	----	----	----	----	----	16	124	−67.2	----	16	122	−62.9	----	10	123	−61.8	----	15	121	−61.0	----	----	----	----	----
16,000	11	104	−65.7	----	----	----	----	----	12	105	−68.0	----	10	104	−63.2	----	6	105	−62.8	----	9	103	−61.5	----	----	----	----	----
17,000	5	88	−65.3	----	----	----	----	----	9	89	−67.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during November 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Phoenix, Ariz. (339 m.)				Pittsburgh, Pa (362 m.)				Portland, Maine (20 m.)				Rapid City, S. Dak. (981 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	29	977	12.3	[2]47	30	973	3.5	[2]69	27	1,014	1.7	84	30	907	0.1	[2]73	30	1,001	4.6	[2]69	30	993	−1.5	[2]81	27	994	11.8	[2]74
500	29	959	17.8	[2]29	30	960	3.4	[2]67	27	956	2.4	74					30	962	5.1	[2]60	30	960	−2.4	[2]82	27	964	13.5	[2]56
1,000	29	904	17.9	[2]20	30	903	1.2	[2]65	27	898	−0.7	73	30	905	0.4	[2]72	30	905	3.4	[2]58	30	901	−3.9	[2]72	27	908	10.7	[2]63
1,500	29	853	14.2	[2]23	30	848	−1.3	[2]62	27	843	−2.9	72	30	851	2.2	[2]54	30	850	1.9	[2]47	30	846	−4.2	[2]52	27	855	8.0	[2]62
2,000	29	803	10.4	[2]26	30	796	−3.9	[2]61	27	791	−4.6	71	30	800	0.2	[2]50	30	799	0.5	[2]40	30	793	−5.0	[2]46	27	805	6.0	[2]47
2,500	29	756	7.1	[2]23	30	747	−5.6	[2]51	27	743	−6.9	68	30	751	−2.1	[2]47	30	750	−1.4	[2]39	30	744	−6.3	[2]46	27	757	4.2	[2]37
3,000	29	711	3.9	[2]22	30	700	−7.3	[2]45	27	696	−8.8	64	30	705	−4.8	[2]50	30	704	−3.4	[2]38	30	698	−8.2	[2]46	27	712	1.7	[2]36
4,000	29	628	−1.9	[2]19	30	616	−11.2	[2]38	26	611	−13.9	58	30	620	−10.6	[2]53	29	620	−8.9	[2]45	28	613	−13.3	[2]48	27	628	−3.8	[2]32
5,000	29	553	−8.6	[2]20	30	540	−17.0	[2]44	26	535	−19.6	55	30	544	−16.4	[2]46	28	544	−14.9	[2]38	28	537	−19.5	[2]53	26	553	−9.7	[2]29
6,000	29	485	−15.1	[2]24	30	472	−23.0	[2]39	26	467	−26.2	56	30	476	−23.4	[2]52	28	476	−21.6	----	27	468	−25.8	[2]49	26	485	−16.3	----
7,000	29	424	−22.8	[2]30	29	411	−29.5	[2]37	25	406	−32.6	54	30	414	−30.3	[2]52	28	415	−28.5	----	27	406	−33.0	[2]50	26	424	−23.8	----
8,000	28	369	−30.7	----	29	356	−36.3	----	25	351	−39.1	----	25	359	−37.8	----	26	360	−36.1	----	27	352	−40.1	----	26	368	−31.3	----
9,000	28	320	−38.5	----	28	308	−42.6	----	19	305	−44.5	----	21	310	−44.6	----	24	311	−43.5	----	27	303	−47.0	----	26	319	−38.8	----
10,000	23	276	−46.0	----	28	265	−48.6	----	15	263	−48.8	----	18	266	−51.6	----	24	268	−50.6	----	26	260	−52.3	----	26	275	−46.3	----
11,000	23	237	−52.4	----	28	227	−53.8	----	11	236	−51.3	----	18	228	−57.6	----	24	229	−56.4	----	24	223	−55.4	----	26	236	−53.5	----
12,000	22	202	−56.3	----	28	194	−56.4	----	8	196	−56.1	----	17	194	−59.7	----	22	196	−58.8	----	22	191	−56.4	----	25	202	−58.2	----
13,000	20	173	−59.3	----	27	166	−57.5	----	7	168	−59.3	----	14	165	−58.5	----	22	167	−58.9	----	21	163	−56.6	----	25	172	−62.0	----
14,000	16	147	−62.5	----	24	142	−58.0	----	6	142	−59.7	----	13	141	−59.1	----	20	142	−60.3	----	17	139	−57.0	----	22	146	−65.3	----
15,000	13	125	−65.8	----	16	120	−58.4	----	5	122	−61.0	----	8	120	−61.9	----	16	121	−62.8	----	6	118	−57.0	----	21	124	−67.7	----
16,000	10	106	−67.5	----	12	103	−60.0	----									11	104	−63.8	----					17	105	−68.9	----
17,000					5	89	−61.9	----									6	89	−65.1	----					9	90	−68.3	----
18,000																									7	76	−65.3	----

Altitude (meters) m. s. l.	San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)[4]			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity				
Surface	28	1,014	16.5	[2]74	30	1,013	25.3	[2]83	30	1,010	12.4	[2]80	29	990	−0.5	85	25	1,018	9.4	[2]82	29	993	2.4	[2]90	----	----	----	----
500	28	959	17.0	[2]53	30	958	21.6	[2]84	30	960	16.5	[2]48	29	957	−1.5	84	25	961	9.0	[2]68	----	----	----	----	----	----	----	----
1,000	27	904	15.5	[2]41	29	905	18.1	[2]82	30	906	15.2	[2]38	29	898	−4.1	83	25	905	8.1	[2]58	29	907	2.8	[2]78	----	----	----	----
1,500	27	853	13.1	[2]40	28	853	15.1	[2]77	30	853	12.4	[2]34	29	843	−6.4	83	25	852	5.9	[2]56	29	853	2.2	[2]60	----	----	----	----
2,000	27	803	10.3	[2]29	28	804	12.7	[2]67	30	803	9.5	[2]28	29	790	−8.5	79	24	801	3.4	[2]51	29	801	1.1	[2]48	----	----	----	----
2,500	27	756	7.6	[2]22	28	757	11.2	[2]49	30	756	7.1	[2]27	29	741	−10.4	74	24	753	0.8	[2]49	29	753	−0.7	[2]46	----	----	----	----
3,000	26	711	5.2	[2]24	28	713	8.8	[2]39	30	711	4.9	[2]23	29	694	−12.7	69	24	707	−2.2	[2]49	29	707	−3.3	[2]49	----	----	----	----
4,000	25	629	−0.2	----	28	632	3.5	[2]29	30	629	−0.6	[2]22	28	608	−17.6	64	24	623	−7.6	[2]50	28	623	−8.9	[2]55	----	----	----	----
5,000	25	554	−6.9	----	27	558	−1.9	[2]19	29	554	−6.6	[2]26	27	531	−23.1	62	23	547	−13.7	[2]58	28	546	−14.7	[2]55	----	----	----	----
6,000	23	487	−13.7	----	27	491	−8.1	----	29	487	−13.6	[2]28	26	462	−30.0	62	20	479	−19.9	[2]63	28	478	−21.1	[2]48	----	----	----	----
7,000	23	426	−21.3	----	27	431	−15.0	----	29	426	−20.6	[2]33	24	401	−36.3	66	19	418	−26.8	[2]67	28	416	−28.2	[2]49	----	----	----	----
8,000	13	372	−28.6	----	25	377	−22.2	----	29	371	−28.4	----	23	348	−42.7	----	15	364	−34.4	----	27	361	−35.7	----	----	----	----	----
9,000	12	322	−36.1	----	25	328	−29.8	----	26	322	−36.4	----	22	299	−48.0	----	15	314	−42.1	----	26	312	−43.6	----	----	----	----	----
10,000	12	278	−43.5	----	23	285	−37.8	----	23	278	−44.3	----	20	257	−51.9	----	14	270	−50.1	----	22	269	−51.5	----	----	----	----	----
11,000	9	240	−50.9	----	23	246	−46.3	----	20	239	−51.1	----	18	220	−52.6	----	11	232	−58.9	----	20	230	−56.9	----	----	----	----	----
12,000	8	206	−55.8	----	22	211	−54.5	----	16	205	−56.0	----	16	188	−53.1	----	9	198	−64.4	----	20	196	−60.3	----	----	----	----	----
13,000	8	175	−59.6	----	21	180	−62.0	----	13	175	−59.8	----	14	161	−54.1	----	9	167	−64.6	----	18	167	−60.6	----	----	----	----	----
14,000	6	149	−64.6	----	17	152	−68.8	----	9	149	−63.6	----	12	137	−55.0	----	7	142	−64.6	----	14	142	−59.2	----	----	----	----	----
15,000	----	----	----	----	16	129	−73.9	----	7	126	−68.0	----	6	118	−55.6	----	7	120	−64.5	----	9	121	−60.2	----	----	----	----	----
16,000	----	----	----	----	15	109	−78.0	----	----	----	----	----	----	----	----	----	----	----	----	----	6	103	−61.2	----	----	----	----	----
17,000	----	----	----	----	14	91	−77.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	7	77	−72.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[1, 3] (21 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity					Number of observations	Pressure	Temperature	Relative humidity
Surface	27	776	12.1	[2]64	25	1,020	16.2	[2]80	23	998	24.0	[2]88	30	1,015	9.4	[2]84	----	----	----	----	30	1,017	7.1	[2]66
500	----	----	----	----	25	963	15.4	[2]64	23	955	23.3	[2]73	30	959	8.9	[2]69	----	----	----	----	30	960	5.9	[2]54
1,000	----	----	----	----	25	908	13.5	[2]60	22	902	21.2	[2]66	30	903	6.2	[2]64	----	----	----	----	30	903	3.2	[2]55
1,500	----	----	----	----	25	855	11.0	[2]55	22	851	18.6	[2]61	30	849	4.1	[2]54	----	----	----	----	30	849	0.6	[2]61
2,000	----	----	----	----	25	805	9.1	[2]40	21	803	16.1	[2]58	30	798	1.9	[2]53	----	----	----	----	30	797	−1.7	[2]61
2,500	27	738	11.2	[2]66	25	758	6.8	[2]40	20	757	13.2	[2]58	30	750	−0.6	[2]53	----	----	----	----	30	748	−3.5	[2]55
3,000	27	714	8.5	[2]71	25	712	4.1	[2]35	20	713	10.1	[2]61	30	704	−3.0	[2]52	----	----	----	----	30	703	−5.0	[2]45
4,000	26	632	2.0	[2]75	25	630	−1.0	[2]31	19	632	4.0	[2]60	30	620	−8.7	[2]54	----	----	----	----	29	618	−9.9	[2]38
5,000	26	558	−3.0	[2]53	25	555	−6.5	[2]33	17	558	−0.7	[2]44	29	544	−15.0	[2]55	----	----	----	----	29	542	−15.9	[2]40
6,000	26	491	−8.7	[2]41	25	487	−13.1	[2]31	17	492	−6.8	[2]35	29	476	−22.0	[2]57	----	----	----	----	29	474	−22.6	[2]39
7,000	25	431	−15.8	[2]40	25	427	−20.5	[2]38	16	432	−13.5	[2]32	29	414	−29.5	[2]55	----	----	----	----	29	413	−29.6	[2]42
8,000	23	377	−22.5	[2]44	25	372	−27.7	[2]41	16	378	−20.4	----	27	359	−36.4	----	----	----	----	----	29	358	−36.7	----
9,000	20	327	−30.0	[2]42	25	322	−34.9	----	16	329	−28.0	----	26	310	−43.0	----	----	----	----	----	27	309	−43.5	----
10,000	18	284	−37.5	----	25	280	−41.9	----	16	286	−36.0	----	24	266	−49.8	----	----	----	----	----	23	268	−49.9	----
11,000	16	245	−45.6	----	25	240	−48.7	----	15	247	−44.2	----	23	229	−56.0	----	----	----	----	----	10	233	−54.8	----
12,000	16	211	−53.5	----	25	206	−55.3	----	15	213	−52.6	----	19	195	−58.6	----	----	----	----	----	----	----	----	----
13,000	16	180	−61.2	----	22	176	−61.1	----	14	182	−60.7	----	17	166	−57.7	----	----	----	----	----	----	----	----	----
14,000	11	153	−67.9	----	21	149	−65.9	----	14	154	−67.3	----	14	142	−58.9	----	----	----	----	----	----	----	----	----
15,000	10	129	−73.3	----	19	126	−69.1	----	12	130	−73.1	----	10	121	−60.2	----	----	----	----	----	----	----	----	----
16,000	10	108	−77.0	----	19	107	−71.2	----	11	109	−78.5	----	6	104	−60.6	----	----	----	----	----	----	----	----	----
17,000	8	92	−78.5	----	14	91	−71.1	----	8	92	−79.4	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	10	76	−68.3	----	6	77	−75.3	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer

[3] Insufficient data.

[4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by airplanes and by radiosondes during December 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,007	−5.6	[1]78	28	841	0.7	[1]70	30	1,021	11.5	[1]83	31	986	5.4	[1]76	31	932	4.5	[1]76	29	958	−5.8	82	30	922	−0.7	[1]86
500	31	955	−5.8	[1]70	----	----	----	----	30	963	11.6	[1]63	31	962	6.2	[1]74	----	----	----	----	----	----	----	----	----	----	----	----
1,000	31	906	−8.0	[1]70	----	----	----	----	30	907	11.4	[1]47	31	906	5.8	[1]67	31	906	6.1	[1]64	29	900	−3.2	76	30	908	0.7	[1]75
1,500	31	840	−9.2	[1]65	----	----	----	----	30	854	10.3	[1]42	31	852	6.0	[1]53	31	853	6.0	[1]57	29	844	−3.8	71	30	853	0.6	[1]60
2,000	31	787	−10.2	[1]59	28	802	0.6	[1]65	30	804	9.2	[1]37	31	801	4.9	[1]48	31	802	5.4	[1]46	28	792	−5.4	68	30	801	−1.1	[1]56
2,500	31	737	−11.9	[1]55	28	753	−0.7	[1]58	30	757	7.2	[1]34	31	754	3.4	[1]43	31	754	3.9	[1]37	28	744	−7.1	63	30	752	−3.2	[1]54
3,000	31	691	−12.8	[1]48	28	707	−2.9	[1]56	30	712	4.9	[1]32	31	708	1.3	[1]43	31	709	1.7	[1]33	28	698	−8.7	60	30	706	−4.8	[1]53
4,000	31	605	−17.4	[1]38	28	623	−7.9	[1]41	30	629	−0.4	[1]32	30	625	−3.6	[1]39	31	625	−4.0	[1]29	28	612	−13.6	56	29	621	−10.0	[1]44
5,000	31	529	−22.7	[1]41	27	547	−13.9	[1]39	29	554	−6.7	[1]27	30	550	−9.6	[1]38	31	550	−10.3	[1]29	27	536	−18.9	52	27	545	−16.2	[1]46
6,000	31	461	−28.8	[1]42	26	479	−20.3	[1]41	28	487	−13.0	[1]34	29	482	−16.0	[1]36	31	482	−16.8	[1]28	26	468	−25.8	50	27	476	−23.0	[1]48
7,000	31	400	−35.0	[1]48	26	418	−27.3	----	28	426	−19.8	[1]41	29	422	−23.1	[1]37	30	422	−23.7	[1]39	24	407	−32.9	49	25	415	−29.7	[1]52
8,000	28	346	−40.5	----	25	362	−34.2	----	28	372	−27.1	[1]43	29	367	−30.3	[1]39	28	367	−30.3	[1]41	22	352	−40.2	----	20	362	−35.3	----
9,000	26	297	−46.2	----	22	313	−40.7	----	26	323	−34.3	----	28	318	−37.3	----	21	319	−36.6	----	17	303	−46.7	----	13	315	−40.9	----
10,000	21	254	−50.6	----	19	271	−47.2	----	21	280	−41.6	----	28	275	−44.2	----	11	278	−42.4	----	10	258	−51.1	----	6	272	−46.9	----
11,000	15	219	−52.5	----	11	232	−51.3	----	16	241	−49.0	----	28	236	−50.4	----	----	----	----	----	6	222	−52.6	----	----	----	----	----
12,000	7	188	−54.5	----	10	199	−55.4	----	15	206	−55.4	----	24	202	−55.8	----	----	----	----	----	6	190	−54.8	----	----	----	----	----
13,000	----	----	----	----	5	170	−57.5	----	12	176	−60.1	----	19	173	−60.7	----	----	----	----	----	5	162	−56.6	----	----	----	----	----
14,000	----	----	----	----	----	----	----	----	8	150	−63.7	----	9	148	−62.2	----	----	----	----	----	----	----	----	----	----	----	----	----
15,000	----	----	----	----	----	----	----	----	6	129	−68.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				Dodge City, Kans. (787 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,019	11.8	[1]92	31	991	−3.3	[1]72	29	987	−12.9	[1]90	31	1,020	7.3	82	31	839	−1.8	[1]68	30	993	−4.5	[1]77	31	929	−2.9	[1]77
500	30	962	14.6	[1]81	31	956	−4.6	[1]73	29	948	−12.9	[1]90	31	961	8.8	69	----	----	----	----	30	958	−5.0	[1]74	----	----	----	----
1,000	30	907	12.9	[1]76	31	897	−7.4	[1]73	29	889	−13.5	[1]88	31	905	7.8	64	----	----	----	----	30	899	−6.0	[1]65	31	905	0.9	[1]58
1,500	30	854	11.8	[1]68	31	841	−8.7	[1]65	29	832	−13.8	[1]79	31	852	6.6	58	----	----	----	----	30	843	−6.7	[1]47	31	851	2.2	[1]45
2,000	30	805	11.0	[1]55	31	788	−9.8	[1]55	29	779	−14.4	[1]65	31	801	5.5	51	31	800	0.3	[1]48	30	790	−8.0	[1]40	31	799	1.0	[1]46
2,500	30	758	9.4	[1]44	31	739	−11.5	[1]47	29	729	−16.1	[1]56	31	753	3.9	47	31	751	−2.0	[1]44	30	741	−9.3	[1]34	31	751	−0.2	[1]40
3,000	30	713	6.9	[1]42	31	692	−13.1	[1]44	29	682	−18.7	[1]58	31	708	1.6	45	31	705	−4.6	[1]45	30	694	−11.3	[1]35	31	705	−2.3	[1]37
4,000	30	631	1.5	[1]39	31	606	−17.5	[1]45	29	596	−23.9	[1]59	27	625	−3.3	38	31	620	−10.5	[1]49	29	608	−15.7	[1]43	31	621	−7.7	[1]32
5,000	27	557	−4.8	[1]42	31	530	−22.6	[1]46	28	519	−29.5	[1]58	26	550	−8.9	35	31	544	−16.9	[1]47	28	533	−21.0	[1]43	31	545	−13.5	[1]32
6,000	27	490	−11.2	[1]40	29	462	−28.4	[1]43	27	450	−35.5	[1]61	26	483	−15.7	33	31	476	−23.6	[1]46	28	465	−27.6	[1]45	31	477	−20.0	[1]35
7,000	26	429	−18.2	[1]45	24	402	−33.6	----	25	390	−41.3	----	26	422	−22.3	32	28	414	−30.3	[1]45	27	404	−33.4	----	30	416	−27.2	[1]37
8,000	26	375	−25.4	[1]45	18	348	−40.0	----	21	336	−46.6	----	26	368	−29.5	33	22	358	−38.0	----	23	350	−39.7	----	30	361	−34.4	[1]41
9,000	26	325	−32.8	----	10	303	−44.0	----	21	289	−49.0	----	24	319	−36.0	42	17	310	−44.6	----	14	303	−46.7	----	30	312	−41.8	----
10,000	24	282	−40.6	----	8	261	−49.6	----	17	247	−50.7	----	20	276	−42.5	----	13	266	−50.9	----	10	260	−50.7	----	30	269	−48.1	----
11,000	23	243	−49.1	----	----	----	----	----	11	212	−50.0	----	17	238	−48.5	----	9	230	−53.4	----	5	224	−56.3	----	29	231	−52.9	----
12,000	11	210	−56.2	----	----	----	----	----	9	181	−49.7	----	14	204	−54.4	----	----	----	----	----	----	----	----	----	28	197	−56.2	----
13,000	9	178	−63.2	----	----	----	----	----	7	155	−49.5	----	13	174	−50.5	----	----	----	----	----	----	----	----	----	28	168	−58.2	----
14,000	8	152	−68.7	----	----	----	----	----	----	----	----	----	10	148	−65.0	----	----	----	----	----	----	----	----	----	20	144	−60.9	----
15,000	8	128	−70.1	----	----	----	----	----	----	----	----	----	8	126	−68.3	----	----	----	----	----	----	----	----	----	15	122	−63.1	----
16,000	6	109	−72.1	----	----	----	----	----	----	----	----	----	6	106	−69.2	----	----	----	----	----	----	----	----	----	7	104	−64.0	----
17,000	6	92	−74.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	El Paso, Tex. (1193 m.)				Ely, Nev. (1908 m.)				Glasgow, Mont. (648 m.)				Great Falls, Mont. (1128 m.)				Greensboro, N. C. (273 m.)				Hatteras, N. C. (3 m.)				Huntington, W. Va. (172 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	885	5.3	[1]68	31	810	−4.3	78	31	942	−4.6	[1]74	30	888	0.5	[1]54	31	988	2.9	[1]72	28	1,020	7.0	[1]83	28	1,001	0.3	[1]82
500	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	31	961	4.5	[1]62	28	961	7.3	[1]54	28	961	0.6	[1]74
1,000	----	----	----	----	----	----	----	----	31	901	−1.3	[1]56	----	----	----	----	31	904	3.2	[1]55	28	904	5.5	[1]51	28	903	−1.4	[1]74
1,500	31	853	6.5	[1]53	----	----	----	----	31	847	−2.0	[1]46	30	848	1.4	[1]44	31	850	1.5	[1]47	28	851	3.7	[1]44	28	848	−2.2	[1]66
2,000	31	802	4.9	[1]52	31	801	−2.8	76	31	794	−3.5	[1]47	30	797	−1.0	[1]43	31	798	0.6	[1]41	28	799	2.3	[1]39	28	796	−2.6	[1]52
2,500	31	754	3.4	[1]45	31	752	−2.6	71	31	746	−5.6	[1]48	30	748	−3.4	[1]42	31	750	−0.7	[1]33	28	751	0.3	[1]40	28	747	−3.7	[1]48
3,000	31	709	0.9	[1]37	31	706	−5.0	70	31	699	−8.0	[1]49	30	702	−5.8	[1]40	31	704	−2.1	[1]32	28	706	−1.3	[1]40	28	701	−5.2	[1]44
4,000	31	625	−4.9	[1]35	31	621	−10.0	67	31	614	−13.6	[1]47	29	617	−11.9	[1]42	31	620	−6.8	[1]32	28	622	−5.7	[1]34	28	616	−10.2	[1]32
5,000	31	550	−10.9	[1]29	31	545	−16.3	62	31	538	−19.5	[1]45	29	541	−18.4	[1]49	30	545	−12.9	[1]34	28	547	−11.5	[1]35	27	541	−15.6	[1]36
6,000	30	482	−17.3	[1]34	31	476	−22.8	58	30	469	−26.4	[1]43	28	472	−25.3	[1]46	30	478	−19.4	[1]40	27	479	−18.3	[1]37	26	472	−21.9	[1]39
7,000	29	421	−23.8	[1]37	31	415	−29.7	55	30	407	−33.6	[1]48	25	411	−31.3	----	30	416	−26.2	----	27	418	−24.8	[1]38	26	412	−28.5	[1]44
8,000	27	367	−30.7	----	31	359	−37.0	49	28	352	−40.6	[1]47	21	356	−38.5	----	29	362	−32.8	----	27	363	−32.0	----	24	358	−34.9	----
9,000	24	318	−37.3	----	29	310	−43.9	----	24	304	−47.2	----	15	308	−45.2	----	29	313	−39.7	----	26	314	−39.1	----	20	310	−41.0	----
10,000	13	274	−44.6	----	28	267	−49.0	----	20	261	−53.1	----	----	----	----	----	29	270	−46.4	----	25	271	−45.8	----	15	270	−46.7	----
11,000	6	235	−49.1	----	28	229	−52.3	----	14	222	−55.9	----	----	----	----	----	29	232	−51.7	----	25	233	−51.1	----	10	232	−52.8	----
12,000	6	201	−54.0	----	25	196	−54.8	----	12	190	−58.3	----	----	----	----	----	28	199	−56.8	----	24	200	−56.3	----	6	197	−57.6	----
13,000	6	172	−57.9	----	22	168	−56.5	----	9	162	−55.7	----	----	----	----	----	28	169	−60.4	----	23	171	−61.1	----	----	----	----	----
14,000	6	146	−61.8	----	18	144	−59.3	----	8	138	−58.6	----	----	----	----	----	19	144	−62.6	----	23	145	−63.7	----	----	----	----	----
15,000	----	----	----	----	16	123	−61.1	----	6	117	−58.9	----	----	----	----	----	15	123	−64.3	----	22	123	−65.5	----	----	----	----	----
16,000	----	----	----	----	11	105	−63.0	----	----	----	----	----	----	----	----	----	9	104	−66.5	----	17	104	−67.7	----	----	----	----	----
17,000	----	----	----	----	6	89	−64.4	----	----	----	----	----	----	----	----	----	----	----	----	----	13	89	−68.0	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	75	−69.2	----	----	----	----	----

[1] Humidity data obtained by electric hygrometer.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	International Falls, Minn. (343 m.)				Joliet, Ill. (175 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Little Rock, Ark. (79 m.)				Louisville, Ky. (166 m.)				Mazatlan, Mexico (80 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	974	−10.6	[2]82	31	1,000	−4.3	[2]77	31	1,022	10.1	[2]87	29	1,014	−0.9	[2]64	31	1,013	4.4	[2]77	29	1,003	0.6	[2]78	23	1,006	22.3	[2]53
800	31	955	−10.1	[2]80	31	960	−3.5	[2]73	31	962	10.2	[2]71	29	956	−1.0	[2]58	31	963	4.0	[2]65	29	962	−0.1	[2]63	23	959	21.5	[2]54
1,000	31	895	−9.7	[2]69	31	901	−4.5	[2]62	31	907	10.2	[2]58	29	898	−3.1	[2]56	31	905	4.2	[2]57	29	903	−1.5	[2]59	23	905	19.3	[2]45
1,500	31	839	−9.4	[2]59	31	846	−4.8	[2]51	31	854	9.0	[2]57	29	843	−4.3	[2]53	31	852	4.4	[2]50	29	849	−1.6	[2]53	23	854	16.6	[2]47
2,000	31	786	−10.7	[2]54	31	793	−5.4	[2]41	31	803	8.1	[2]47	29	791	−5.3	[2]51	31	800	3.4	[2]49	29	797	−1.9	[2]48	23	805	13.5	[2]47
2,500	31	736	−12.8	[2]56	31	744	−6.6	[2]40	31	756	6.1	[2]43	29	742	−6.9	[2]47	31	752	1.7	[2]42	29	748	−2.9	[2]40	22	758	10.5	[2]48
3,000	31	690	−15.0	[2]55	31	697	−8.1	[2]40	31	711	3.9	[2]41	29	696	−8.5	[2]42	30	707	0.0	[2]35	29	702	−4.6	[2]36	22	714	7.8	[2]45
4,000	31	603	−20.3	[2]57	30	612	−13.1	[2]36	31	628	−1.8	[2]38	27	612	−13.0	[2]36	30	623	−4.8	[2]35	29	618	−8.8	[2]32	21	632	1.9	[2]42
5,000	31	526	−26.2	[2]53	30	536	−18.7	[2]36	29	553	−7.9	[2]34	27	535	−19.2	[2]43	30	548	−11.0	[2]31	29	543	−14.7	[2]37	20	558	−3.9	[2]46
6,000	30	458	−32.2	----	30	469	−24.8	[2]38	29	486	−14.5	[2]36	26	466	−25.5	[2]48	30	481	−17.5	[2]33	29	475	−21.3	[2]42	19	491	−10.3	----
7,000	29	397	−38.5	----	30	407	−31.7	----	27	424	−21.6	[2]42	23	406	−31.6	[2]44	30	420	−24.7	[2]38	29	414	−28.2	[2]44	19	430	−17.3	----
8,000	26	343	−44.4	----	28	353	−39.0	----	26	370	−28.6	[2]51	22	351	−38.8	----	28	365	−31.8	[2]39	28	358	−35.4	----	18	376	−24.2	----
9,000	17	296	−48.3	----	21	308	−44.0	----	26	320	−35.8	----	20	304	−45.3	----	28	316	−39.0	----	19	312	−40.9	----	18	327	−31.8	----
10,000	12	253	−51.4	----	11	266	−49.1	----	24	278	−43.1	----	18	261	−52.1	----	27	273	−45.9	----	13	270	−46.7	----	17	284	−39.8	----
11,000	5	218	−50.9	----	7	228	−55.6	----	19	239	−50.1	----	15	223	−54.8	----	26	234	−52.2	----	8	234	−51.9	----	16	244	−47.3	----
12,000	----	----	----	----	6	196	−58.4	----	9	205	−55.8	----	10	192	−57.3	----	23	201	−57.4	----	8	200	−56.8	----	16	209	−54.7	----
13,000	----	----	----	----	5	167	−60.1	----	----	----	----	----	7	164	−60.0	----	22	171	−61.2	----	8	171	−61.4	----	16	179	−61.1	----
14,000	----	----	----	----	5	142	−60.5	----	----	----	----	----	7	140	−62.0	----	20	146	−63.4	----	7	145	−63.6	----	15	152	−65.3	----
15,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17	124	−64.0	----	6	123	−64.4	----	13	129	−68.6	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	105	−66.0	----	6	104	−64.6	----	9	109	−71.3	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	92	−71.4	----

Altitude (meters) m. s. l.	Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (2 m.)				Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	973	4.1	82	31	1,020	16.8	89	31	1,001	3.1	[2]77	30	1,020	5.3	[2]72	31	1,018	10.6	[2]72	31	868	−1.1	[2]80	26	975	1.9	[2]79
800	31	903	4.5	81	31	963	17.2	80	31	962	2.8	[2]69	30	960	4.8	[2]55	31	959	10.0	[2]56	----	----	----	----	26	962	2.9	[2]69
1,000	31	905	5.0	71	31	908	14.2	80	31	905	1.4	[2]65	30	903	2.8	[2]52	31	903	7.3	[2]53	----	----	----	----	26	905	4.2	[2]51
1,500	31	852	3.8	64	31	856	12.1	71	31	851	1.5	[2]54	30	849	1.7	[2]46	31	850	5.1	[2]46	31	854	0.2	[2]73	26	851	4.6	[2]47
2,000	31	800	1.7	60	31	806	10.8	60	31	799	0.9	[2]46	30	797	0.1	[2]46	31	799	3.1	[2]42	31	801	−0.8	[2]62	26	800	3.8	[2]42
2,500	31	752	0.0	54	31	759	9.4	49	31	751	−0.4	[2]44	30	749	−1.2	[2]46	31	750	0.3	[2]42	31	752	−3.2	[2]61	24	752	2.4	[2]37
3,000	31	706	−2.2	50	31	714	7.5	37	31	705	−1.7	[2]37	29	703	−3.2	[2]43	31	705	−2.7	[2]41	31	706	−5.4	[2]56	24	707	−0.2	[2]35
4,000	30	622	−8.0	45	31	632	2.6	34	30	621	−6.3	[2]35	29	619	−8.3	[2]36	31	621	−8.4	[2]44	31	621	−10.8	[2]48	22	624	−4.5	[2]30
5,000	30	546	−14.2	48	30	558	−2.9	30	29	546	−12.2	[2]37	29	544	−14.5	[2]42	31	545	−14.8	[2]49	31	544	−17.1	[2]46	21	549	−11.0	[2]30
6,000	29	478	−20.8	47	30	491	−9.2	29	28	478	−18.6	[2]38	28	476	−20.8	[2]46	31	476	−21.4	[2]45	31	476	−24.1	[2]52	21	481	−17.9	[2]27
7,000	28	417	−27.5	46	29	431	−16.4	30	28	417	−25.6	[2]40	27	415	−27.9	[2]49	30	416	−28.4	[2]48	31	414	−31.2	[2]53	19	420	−25.1	[2]32
8,000	26	362	−35.0	54	29	376	−23.7	29	27	363	−33.0	----	----	----	----	----	30	360	−35.8	----	30	358	−38.1	----	19	364	−32.4	----
9,000	24	312	−45.2	----	28	327	−31.1	28	25	314	−39.9	----	----	----	----	----	30	312	−42.4	----	30	309	−44.8	----	16	316	−39.2	----
10,000	23	269	−50.6	----	26	284	−38.5	----	24	271	−47.2	----	----	----	----	----	29	268	−48.2	----	30	266	−50.2	----	12	272	−45.3	----
11,000	22	231	−55.6	----	26	244	−45.8	----	15	233	−53.0	----	----	----	----	----	25	231	−51.5	----	28	228	−53.4	----	7	233	−51.3	----
12,000	20	197	−56.9	----	25	210	−52.9	----	12	199	−57.2	----	----	----	----	----	22	198	−54.6	----	24	195	−55.8	----	----	----	----	----
13,000	15	168	−56.8	----	24	180	−59.8	----	12	170	−61.2	----	----	----	----	----	18	169	−56.7	----	20	166	−57.3	----	----	----	----	----
14,000	8	145	−59.0	----	21	153	−65.1	----	12	145	−64.5	----	----	----	----	----	18	144	−60.1	----	14	141	−58.3	----	----	----	----	----
15,000	----	----	----	----	15	129	−68.4	----	11	123	−66.2	----	----	----	----	----	16	123	−63.4	----	10	120	−59.7	----	----	----	----	----
16,000	----	----	----	----	12	109	−71.5	----	7	105	−68.3	----	----	----	----	----	12	105	−65.0	----	7	102	−60.0	----	----	----	----	----
17,000	----	----	----	----	9	92	−75.1	----	6	88	−68.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	6	78	−77.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Omaha, Nebr. (301 m.)				Pensacola, Fla.[4] (24 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (362 m.)				Portland, Maine (20 m.)				Rapid City, S. Dak. (981 m.)				St. Louis Mo. (171 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	986	−3.0	[2]70	----	----	----	----	30	977	10.0	[2]72	31	972	−1.6	[2]69	28	1,013	−6.9	77	31	905	−3.5	[2]67	31	1,003	−1.3	[2]76
800	30	962	−2.5	[2]66	----	----	----	----	30	959	13.5	[2]50	31	959	−1.9	[2]67	28	953	−5.2	75	----	----	----	----	31	962	−1.5	[2]68
1,000	30	903	−2.3	[2]51	----	----	----	----	30	904	11.2	[2]44	31	901	−3.9	[2]64	28	894	−6.8	72	31	903	−3.0	[2]65	31	904	−1.8	[2]59
1,500	30	848	−1.9	[2]44	----	----	----	----	30	851	7.7	[2]47	31	845	−5.4	[2]63	28	838	−8.4	70	31	849	−0.6	[2]45	31	849	−1.5	[2]48
2,000	30	796	−2.8	[2]43	----	----	----	----	30	800	4.3	[2]49	31	793	−6.3	[2]52	28	785	−10.0	69	31	797	−2.7	[2]44	31	797	−1.8	[2]42
2,500	30	747	−4.3	[2]42	----	----	----	----	30	752	1.1	[2]44	31	744	−7.3	[2]45	28	736	−12.2	66	31	748	−4.9	[2]42	30	748	−3.3	[2]36
3,000	30	701	−6.4	[2]40	----	----	----	----	30	707	−1.9	[2]41	31	697	−9.1	[2]41	28	689	−14.0	60	31	702	−6.7	[2]40	30	702	−4.7	[2]35
4,000	30	616	−10.9	[2]42	----	----	----	----	30	622	−7.6	[2]29	30	612	−13.3	[2]40	28	603	−19.1	56	31	617	−12.1	[2]41	26	618	−9.2	[2]33
5,000	30	540	−16.8	[2]44	----	----	----	----	29	546	−13.7	[2]32	30	537	−18.7	[2]35	28	527	−24.4	52	31	540	−18.2	[2]39	26	542	−15.1	[2]25
6,000	30	472	−23.5	[2]37	----	----	----	----	29	478	−20.5	[2]35	30	468	−24.5	[2]37	27	459	−30.6	49	30	472	−23.2	[2]45	25	474	−22.2	----
7,000	30	411	−30.5	[2]43	----	----	----	----	29	417	−27.5	[2]34	30	407	−30.6	[2]37	21	399	−35.6	44	29	410	−32.1	[2]47	25	413	−29.5	----
8,000	27	356	−37.5	----	----	----	----	----	28	362	−34.1	----	30	353	−37.0	----	18	347	−40.9	----	26	355	−39.4	----	22	359	−36.0	----
9,000	20	309	−42.9	----	----	----	----	----	28	313	−40.6	----	27	305	−42.9	----	13	300	−46.3	----	22	305	−46.9	----	16	310	−42.9	----
10,000	9	268	−48.6	----	----	----	----	----	28	270	−46.7	----	25	263	−48.3	----	5	258	−51.8	----	19	261	−53.2	----	11	269	−49.0	----
11,000	7	230	−53.8	----	----	----	----	----	27	232	−51.4	----	17	225	−52.8	----	----	----	----	----	17	224	−55.9	----	8	231	−54.6	----
12,000	7	196	−56.2	----	----	----	----	----	27	199	−54.9	----	16	193	−55.3	----	----	----	----	----	14	192	−56.5	----	7	198	−59.5	----
13,000	----	----	----	----	----	----	----	----	27	170	−57.3	----	16	165	−57.0	----	----	----	----	----	7	165	−56.4	----	5	169	−61.7	----
14,000	----	----	----	----	----	----	----	----	24	145	−60.0	----	12	142	−60.2	----	----	----	----	----	5	141	−56.9	----	----	----	----	----
15,000	----	----	----	----	----	----	----	----	20	124	−62.8	----	9	121	−61.3	----	----	----	----	----	----	----	----	----	----	----	----	----
16,000	----	----	----	----	----	----	----	----	14	106	−65.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	7	90	−67.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[4] No data.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (73 m.)				Sault Ste Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	992	−5.1	[2] 73	31	993	9.8	[2] 80	28	1,015	14.2	[2] 78	29	1,014	24.5	[2] 81	31	1,009	11.2	[2] 78	29	988	−7.8	82	21	1,020	5.0	[2] 83
500	31	938	−5.4	[2] 68	31	963	10.4	[2] 74	28	959	12.3	[2] 66	29	960	21.0	[2] 81	31	959	11.8	[2] 60	29	954	−8.4	83	21	962	4.7	[2] 69
1,000	31	899	−5.8	[2] 56	31	907	8.8	[2] 72	28	903	9.6	[2] 62	29	906	17.6	[2] 81	31	903	9.3	[2] 49	29	894	−10.7	85	21	905	2.8	[2] 60
1,500	31	843	−6.3	[2] 45	31	854	9.1	[2] 61	27	850	6.7	[2] 61	29	854	14.5	[2] 78	31	850	6.8	[2] 46	29	838	−11.6	78	21	851	2.2	[2] 56
2,000	31	791	−7.7	[2] 39	31	804	7.8	[2] 55	27	800	3.5	[2] 50	29	805	11.6	[2] 67	31	800	4.5	[2] 41	29	784	−12.9	75	21	800	0.4	[2] 55
2,500	31	741	−9.2	[2] 36	31	756	6.4	[2] 43	27	751	1.2	[2] 41	28	758	10.3	[2] 52	31	752	2.2	[2] 40	29	734	−14.5	76	21	751	−1.6	[2] 50
3,000	31	695	−11.2	[2] 33	31	711	4.2	[2] 39	27	706	−1.4	[2] 40	28	714	8.3	[2] 35	31	706	−0.4	[2] 39	29	687	−16.4	70	21	705	−4.6	[2] 52
4,000	30	609	−16.1	[2] 32	29	628	−1.5	[2] 39	26	622	−6.7	[2] 38	27	632	3.6	[2] 24	31	623	−6.8	[2] 39	29	601	−21.1	67	19	620	−10.6	[2] 61
5,000	30	533	−22.2	[2] 44	29	554	−7.3	[2] 32	24	547	−13.1	[2] 39	22	558	−2.4	[2] 21	31	547	−13.1	[2] 39	28	524	−26.7	63	18	543	−17.1	[2] 68
6,000	30	464	−28.7	[2] 41	29	486	−13.9	[2] 31	21	479	−19.7	----	22	492	−7.9	----	29	479	−20.4	[2] 46	24	456	−32.3	63	16	475	−23.4	[2] 67
7,000	29	403	−35.6	----	29	426	−20.6	----	20	418	−25.9	----	21	432	−14.7	----	28	417	−27.7	[2] 49	22	396	−37.4	60	16	413	−30.4	[2] 64
8,000	24	350	−41.0	----	29	371	−27.3	----	5	362	−32.6	----	21	377	−22.0	----	28	362	−34.9	----	17	343	−43.2	----	9	358	−39.0	----
9,000	22	302	−47.4	----	28	322	−34.5	----	5	313	−39.8	----	20	328	−29.7	----	27	314	−39.6	----	10	299	−49.1	----	8	307	−47.9	----
10,000	10	261	−51.4	----	24	278	−41.9	----	5	270	−46.2	----	19	285	−37.3	----	25	271	−45.4	----	6	256	−54.0	----	5	264	−54.6	----
11,000	----	----	----	----	15	240	−48.4	----	----	----	----	----	17	246	−44.7	----	21	234	−50.7	----	----	----	----	----	----	----	----	----
12,000	----	----	----	----	9	207	−56.1	----	----	----	----	----	17	211	−52.2	----	15	200	−55.6	----	----	----	----	----	----	----	----	----
13,000	----	----	----	----	7	175	−62.5	----	----	----	----	----	15	180	−58.8	----	9	172	−61.1	----	----	----	----	----	----	----	----	----
14,000	----	----	----	----	7	149	−65.0	----	----	----	----	----	15	153	−65.4	----	5	148	−64.5	----	----	----	----	----	----	----	----	----
15,000	----	----	----	----	6	126	−67.5	----	----	----	----	----	13	130	−70.4	----	----	----	----	----	----	----	----	----	----	----	----	----
16,000	----	----	----	----	6	107	−68.7	----	----	----	----	----	12	110	−74.7	----	----	----	----	----	----	----	----	----	----	----	----	----
17,000	----	----	----	----	5	91	−70.3	----	----	----	----	----	12	93	−78.0	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	7	78	−77.1	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Spokane, Wash. (598 m.)				Swan Island, West Indies (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Tongue Point, Oreg.[3] (21 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	952	−1.7	[2] 91	15	1,016	24.2	[2] 78	29	775	13.0	[2] 57	23	1,020	16.1	[2] 88	19	1,000	23.6	[2] 85	31	1,016	7.5	[2] 19	----	----	----	----
500	----	----	----	----	15	960	20.8	[2] 80	----	----	----	----	23	963	16.6	[2] 72	19	957	22.6	[2] 75	31	960	6.7	[2] 64	----	----	----	----
1,000	30	906	−1.5	[2] 85	15	906	17.1	[2] 79	----	----	----	----	23	908	14.1	[2] 72	19	904	20.1	[2] 67	31	903	4.5	[2] 58	----	----	----	----
1,500	30	851	−1.4	[2] 65	15	854	13.9	[2] 72	----	----	----	----	23	856	12.6	[2] 52	19	853	17.3	[2] 68	31	849	2.6	[2] 54	----	----	----	----
2,000	30	798	−2.5	[2] 52	15	805	11.9	[2] 60	----	----	----	----	23	806	11.0	[2] 44	18	804	15.0	[2] 63	31	798	0.6	[2] 48	----	----	----	----
2,500	30	750	−3.7	[2] 50	15	758	9.9	[2] 51	29	757	12.8	[2] 54	23	759	9.7	[2] 35	18	757	12.5	[2] 53	31	750	−1.7	[2] 47	----	----	----	----
3,000	30	704	−5.7	[2] 45	15	714	8.0	[2] 41	29	714	10.3	[2] 54	23	714	7.5	[2] 33	18	713	9.1	[2] 50	31	704	−4.2	[2] 47	----	----	----	----
4,000	30	618	−11.5	[2] 45	14	632	4.4	[2] 35	29	632	3.3	[2] 62	23	632	1.8	[2] 33	14	632	5.2	[2] 25	29	620	−9.5	[2] 47	----	----	----	----
5,000	30	542	−18.5	[2] 46	14	558	−1.3	[2] 32	29	558	−2.7	[2] 39	23	557	−4.1	[2] 28	13	559	0.6	[2] 17	29	544	−16.0	[2] 46	----	----	----	----
6,000	30	473	−24.3	[2] 43	13	492	−6.8	----	29	491	−8.4	[2] 26	23	490	−11.0	[2] 32	13	493	−5.7	----	28	475	−22.8	[2] 49	----	----	----	----
7,000	30	412	−31.1	[2] 47	13	432	−13.6	----	29	431	−15.1	[2] 30	22	430	−17.5	[2] 34	12	433	−12.8	----	28	414	−29.4	[2] 50	----	----	----	----
8,000	30	356	−38.3	----	13	378	−20.4	----	26	377	−22.3	----	22	375	−25.2	[2] 42	11	379	−21.0	----	28	359	−36.7	----	----	----	----	----
9,000	26	308	−45.0	----	13	329	−27.7	----	25	328	−29.9	----	22	326	−32.6	----	11	330	−29.0	----	26	310	−44.7	----	----	----	----	----
10,000	17	265	−51.1	----	11	286	−34.8	----	24	285	−37.8	----	22	282	−40.4	----	11	286	−37.6	----	25	266	−52.1	----	----	----	----	----
11,000	9	228	−56.3	----	10	248	−42.6	----	24	245	−46.2	----	22	243	−48.5	----	10	247	−46.3	----	20	228	−55.4	----	----	----	----	----
12,000	----	----	----	----	9	214	−48.6	----	20	211	−54.3	----	22	208	−56.1	----	9	212	−53.3	----	15	195	−55.7	----	----	----	----	----
13,000	----	----	----	----	6	183	−56.0	----	19	180	−62.0	----	22	177	−62.4	----	9	182	−60.6	----	10	167	−54.3	----	----	----	----	----
14,000	----	----	----	----	5	155	−63.8	----	16	152	−67.6	----	21	151	−67.0	----	8	154	−68.0	----	----	----	----	----	----	----	----	----
15,000	----	----	----	----	5	131	−69.2	----	13	129	−71.6	----	17	128	−68.8	----	8	130	−74.9	----	----	----	----	----	----	----	----	----
16,000	----	----	----	----	----	----	----	----	8	109	−75.2	----	16	108	−71.5	----	5	110	----	----	----	----	----	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	7	92	−76.9	----	11	92	−74.0	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	8	78	−74.0	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Washington, D. C. (25 m.)				Altitude (meters) m. s. l.	Washington, D. C. (25 m.)			Altitude (meters) m. s. l.	Washington, D. C. (25 m.)			Altitude (meters) m. s. l.	Washington, D. C. (25 m.)		
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature		Number of observations	Pressure	Temperature		Number of observations	Pressure	Temperature
Surface	31	1,018	1.7	[2] 59	2,500	31	745	−5.1	[2] 52	7,000	31	410	−29.8	[2] 48	12,000	13	194	−54.8
500	31	959	1.0	[2] 52	3,000	31	699	−6.4	[2] 43	8,000	30	356	−36.6	----	13,000	12	165	−57.5
1,000	31	901	−1.2	[2] 55	4,000	31	615	−10.7	[2] 41	9,000	30	307	−43.3	----	14,000	9	139	−59.7
1,500	31	846	−3.1	[2] 59	5,000	31	539	−16.8	[2] 45	10,000	26	264	−49.3	----	15,000	5	118	−59.8
2,000	31	794	−4.1	[2] 56	6,000	31	472	−23.2	[2] 45	11,000	19	227	−53.0	----				

[1] U. S. Navy.

[2] Humidity data obtained by electric hygrometer.

[3] Insufficient data.

LATE REPORTS

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during 1942 [1]

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	May 1942 Tongue Point, Oreg. (21 m.)				June 1942 Tongue Point, Oreg. (21 m.)				July 1942 Tongue Point, Oreg. (21 m.)				August 1942 Tongue Point, Oreg. (21 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity.
Surface	26	1,014	12.0	79	16	1,017	15.5	76	26	1,015	17.4	83	23	1,014	16.4	84
500	26	957	8.9	78	16	959	13.2	72	26	960	15.2	82	23	958	15.2	84
1,000	26	901	5.8	76	16	905	10.8	66	26	905	14.2	72	23	904	15.5	64
1,500	26	847	3.2	74	16	853	8.9	61	26	853	12.5	62	23	852	14.5	52
2,000	26	796	0.4	69	16	802	6.4	53	26	803	10.5	54	23	802	12.3	42
2,500	26	748	−2.7	64	16	754	3.5	46	26	756	8.2	47	23	756	10.1	34
3,000	26	702	−5.5	65	16	709	0.6	42	26	711	5.4	40	23	711	7.5	33
4,000	26	617	−11.3	65	16	625	−5.3	42	26	629	−0.5	34	22	629	1.8	30
5,000	25	541	−17.8	66	16	550	−11.5	42	26	554	−7.1	31	22	555	−5.3	36
6,000	24	472	−24.9	66	15	482	−18.1	45	26	486	−14.2	37	22	488	−12.2	38
7,000	24	411	−32.1	69	14	421	−25.4	47	26	426	−21.2	35	20	428	−19.6	39
8,000	22	355	−38.7	70	13	366	−32.5	------	12	371	−28.9	------	16	373	−26.8	------
9,000	22	307	−44.8	------	13	317	−39.4	------	11	321	−36.5	------	16	324	−34.1	------
10,000	21	264	−50.5	------	11	274	−45.7	------	10	278	−43.3	------	15	280	−40.6	------
11,000	18	227	−54.0	------	9	235	−50.6	------	7	239	−49.2	------	14	241	−47.1	------
12,000	18	194	−54.4	------	9	202	−54.2	------	------	------	------	------	14	207	−51.8	------
13,000	15	165	−55.2	------	9	172	−56.4	------	------	------	------	------	10	178	−54.0	------
14,000	13	141	−55.7	------	8	147	−55.5	------	------	------	------	------	8	152	−56.0	------
15,000	11	121	−56.2	------	6	126	−54.8	------	------	------	------	------	------	------	------	------
16,000	10	103	−56.6	------	------	------	------	------	------	------	------	------	------	------	------	------
17,000	6	89	−56.8	------	------	------	------	------	------	------	------	------	------	------	------	------

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1942

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Atlanta, Ga. (300 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Charleston, S. C. (14 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	362	837	14.0	38	365	983	14.3	76	361	955	5.1	77	363	916	10.1	61	361	1,014	21.0	86	361	990	7.6	80	361	1,016	16.0	87
500	----	----	----	----	365	961	15.4	68	----	----	----	----	----	----	----	----	361	958	19.7	80	361	957	7.7	75	361	960	16.6	70
1,000	----	----	----	----	365	906	13.4	66	361	899	5.6	71	363	901	11.6	57	361	904	17.8	68	361	900	5.4	74	361	905	14.0	67
1,500	----	----	----	----	365	853	11.1	64	361	846	3.8	70	363	849	9.9	53	361	853	16.0	60	361	847	3.0	74	360	853	11.4	64
2,000	362	800	13.4	38	364	803	8.8	61	360	794	1.6	67	363	799	6.9	53	361	804	14.0	54	361	796	1.0	70	360	803	9.0	61
2,500	362	754	10.0	38	364	756	6.5	56	359	746	−1.0	64	363	751	3.5	53	361	757	11.6	49	361	747	−1.2	66	360	756	6.8	55
3,000	362	709	6.4	39	364	711	3.9	53	359	701	−3.7	61	363	706	0.2	54	361	713	9.1	46	361	702	−3.5	63	360	711	4.4	52
4,000	362	627	−0.9	42	361	628	−1.4	48	356	617	−9.6	57	360	622	−6.4	54	360	631	3.2	43	356	618	−8.5	58	354	628	−1.0	48
5,000	359	552	−7.9	45	353	554	−7.4	45	349	541	−16.1	54	357	547	−13.0	53	355	558	−2.9	41	352	542	−14.3	54	346	554	−7.1	45
6,000	355	485	−14.6	44	349	486	−13.8	42	341	473	−22.8	52	352	479	−19.8	51	351	491	−9.4	40	346	475	−20.6	51	336	486	−13.3	43
7,000	349	424	−21.4	43	346	425	−20.4	40	337	412	−30.0	50	350	418	−26.9	50	344	431	−16.1	39	334	414	−27.4	49	324	426	−20.1	41
8,000	347	370	−28.6	41	339	371	−27.6	39	328	357	−37.2	----	340	363	−34.1	48	337	376	−23.0	38	329	359	−34.2	----	309	371	−27.1	40
9,000	336	321	−35.7	----	334	322	−34.8	38	317	308	−44.0	----	332	314	−41.3	----	328	327	−30.1	37	314	311	−40.6	----	297	322	−34.3	----
10,000	330	277	−42.7	----	325	279	−41.9	----	307	265	−49.7	----	320	270	−47.6	----	325	284	−37.5	----	296	268	−46.4	----	291	279	−41.6	----
11,000	310	239	−49.1	----	320	240	−48.4	----	293	227	−53.4	----	304	232	−52.7	----	321	245	−45.0	----	279	230	−50.9	----	280	240	−48.3	----
12,000	298	205	−53.7	----	310	206	−54.0	----	269	194	−55.2	----	289	198	−55.4	----	307	211	−52.1	----	253	197	−54.3	----	265	206	−54.0	----
13,000	284	175	−57.2	----	301	176	−58.2	----	255	166	−55.5	----	263	170	−56.2	----	299	180	−58.4	----	237	168	−56.1	----	252	176	−58.3	----
14,000	269	149	−60.4	----	283	150	−61.5	----	232	142	−55.8	----	244	145	−56.8	----	289	153	−64.2	----	220	143	−57.4	----	233	150	−61.8	----
15,000	252	127	−63.2	----	265	127	−64.2	----	183	120	−56.5	----	227	123	−57.9	----	278	130	−69.4	----	195	122	−58.4	----	208	127	−64.9	----
16,000	225	108	−65.5	----	240	108	−66.0	----	----	----	----	----	201	105	−58.9	----	255	110	−73.4	----	164	104	−59.9	----	185	108	−66.8	----
17,000	201	91	−65.9	----	195	92	−66.4	----	----	----	----	----	170	90	−59.2	----	215	92	−75.5	----	----	----	----	----	----	----	----	----
18,000	160	77	−65.0	----	----	----	----	----	----	----	----	----	----	----	----	----	188	78	−74.8	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 m.)				Joliet, Ill. (178 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	365	837	7.6	63	362	991	7.2	84	364	881	17.2	41	361	809	6.5	53	360	886	7.1	60	361	997	10.8	83	356	995	8.0	84
500	----	----	----	----	362	956	7.9	76	----	----	----	----	----	----	----	----	----	----	----	----	361	958	11.7	74	356	957	8.8	78
1,000	----	----	----	----	362	900	5.9	72	----	----	----	----	----	----	----	----	----	----	----	----	361	903	9.3	71	356	901	6.8	75
1,500	----	----	----	----	360	846	3.9	69	364	850	17.9	38	----	----	----	----	360	847	6.9	58	361	850	6.6	72	355	847	4.9	72
2,000	365	799	8.9	57	360	795	1.8	64	364	801	14.8	37	361	799	7.9	52	360	796	3.9	57	361	799	4.2	69	353	796	2.9	69
2,500	365	752	6.2	55	360	747	−0.4	60	364	755	11.2	39	361	753	6.7	48	360	748	0.5	58	361	751	1.9	65	351	749	0.8	65
3,000	365	707	2.8	54	359	702	−2.8	57	364	711	7.6	40	361	708	3.1	48	360	703	−2.9	60	361	706	−0.5	62	351	703	−1.7	62
4,000	365	624	−4.2	56	356	618	−8.1	51	364	629	0.8	42	360	625	−4.0	48	358	619	−9.4	61	358	622	−5.6	56	344	620	−7.2	58
5,000	365	549	−11.2	57	352	542	−14.1	49	363	554	−6.2	43	358	550	−10.9	48	350	543	−16.0	60	353	547	−11.2	52	342	544	−13.2	56
6,000	361	481	−18.2	56	345	475	−20.4	47	358	487	−12.8	42	350	482	−18.0	47	345	475	−22.9	58	348	480	−17.5	48	336	477	−19.6	54
7,000	350	420	−25.3	53	338	414	−27.1	45	350	427	−19.6	40	343	421	−25.2	46	340	413	−30.1	56	345	419	−24.2	46	331	416	−26.5	53
8,000	346	365	−32.7	49	325	359	−34.0	----	344	372	−26.6	38	335	366	−32.4	45	334	358	−37.2	----	341	364	−31.2	----	323	361	−33.4	----
9,000	336	316	−40.0	----	320	311	−40.7	----	338	323	−33.9	37	326	316	−39.8	----	333	309	−44.0	----	337	316	−38.3	----	317	312	−40.2	----
10,000	328	272	−46.6	----	309	268	−46.7	----	333	280	−41.1	----	320	273	−46.5	----	327	266	−50.0	----	329	272	−44.8	----	311	270	−46.3	----
11,000	321	234	−52.2	----	298	230	−51.6	----	329	241	−48.1	----	310	234	−52.1	----	326	228	−54.1	----	324	234	−50.5	----	303	232	−51.1	----
12,000	316	200	−55.8	----	277	197	−54.8	----	321	206	−54.0	----	294	201	−55.4	----	320	195	−55.7	----	309	201	−55.0	----	296	198	−54.4	----
13,000	300	171	−57.6	----	260	168	−56.6	----	314	176	−58.2	----	279	171	−57.4	----	306	167	−55.6	----	288	171	−58.2	----	287	169	−56.4	----
14,000	278	145	−59.3	----	234	144	−57.8	----	305	150	−61.9	----	260	146	−58.9	----	293	142	−55.5	----	261	146	−60.5	----	272	144	−58.0	----
15,000	253	124	−61.0	----	208	122	−59.1	----	290	128	−65.3	----	242	124	−60.5	----	274	122	−56.2	----	237	124	−62.5	----	250	123	−59.5	----
16,000	231	105	−62.5	----	162	104	−60.1	----	263	108	−68.1	----	220	106	−61.9	----	246	104	−57.0	----	196	106	−64.0	----	215	105	−60.7	----
17,000	198	90	−63.1	----	----	----	----	----	219	91	−68.8	----	172	90	−62.0	----	197	89	−57.4	----	----	----	----	----	174	89	−61.2	----
18,000	136	76	−62.1	----	----	----	----	----	150	77	−68.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] No data available for September, October, and November 1942.

Mean free-air barometric pressure in millibars, temperatures in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1942—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

	Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (6 m.)			
Surface	359	1,016	17.8	88	328	1,012	10.1	75	364	968	13.6	63	363	1,017	21.2	85	356	996	14.0	74	302	1,018	14.2	77	364	1,016	13.5	78
500	359	959	17.5	73	328	958	10.0	61	364	957	13.7	61	363	961	20.6	80	356	959	14.2	68	302	960	13.5	66	364	958	13.2	69
1,000	359	905	15.5	67	328	902	7.8	58	364	902	11.7	60	363	906	17.6	77	356	904	11.8	66	302	905	11.2	63	364	902	13.3	55
1,500	358	853	13.6	59	328	849	5.6	58	362	849	8.6	62	363	855	15.1	72	355	851	9.4	66	302	852	8.8	61	364	850	11.7	48
2,000	356	803	11.5	54	328	798	3.6	55	361	799	5.3	66	363	808	12.9	63	355	801	7.2	64	300	802	6.6	59	363	800	9.3	43
2,500	356	757	9.3	49	328	750	1.4	53	361	751	2.5	64	363	759	10.6	58	355	754	4.8	60	299	754	4.1	55	363	753	6.7	39
3,000	356	712	6.8	46	328	705	−1.0	51	361	706	−0.2	59	363	715	8.1	52	354	709	2.3	56	299	709	1.7	52	363	709	3.8	38
4,000	353	630	1.3	43	326	621	−6.2	47	351	622	−5.9	51	360	633	2.8	46	346	626	−2.8	52	290	625	−3.9	48	362	626	−2.0	36
5,000	350	556	−4.8	41	324	546	−12.0	46	347	547	−12.0	48	356	558	−3.0	44	334	551	−8.6	48	269	550	−10.0	43	358	551	−8.4	35
6,000	349	489	−11.4	40	317	478	−18.2	46	340	479	−18.8	46	345	492	−9.0	40	326	484	−14.8	45					355	484	−15.2	34
7,000	345	428	−18.2	38	312	418	−24.8	44	336	418	−26.0	45	338	432	−15.6	38	320	423	−21.6	43					348	423	−22.5	34
8,000	342	374	−25.2	38	304	363	−31.7		330	363	−33.5	44	329	377	−22.5	37	312	368	−28.7	42					341	368	−30.0	34
9,000	339	325	−32.5	37	300	314	−38.5		329	314	−40.6		322	328	−29.5	36	305	319	−35.6						333	319	−37.5	33
10,000	336	281	−39.8		291	272	−44.9		326	271	−47.3		317	285	−36.9		292	276	−42.5						318	276	−44.9	
11,000	324	242	−46.9		283	234	−50.4		321	233	−52.8		300	246	−44.2		278	238	−48.8						307	237	−51.2	
12,000	310	208	−53.4		268	200	−54.4		315	199	−56.0		279	211	−51.1		265	204	−54.0						293	203	−55.8	
13,000	299	178	−58.9		255	171	−57.4		304	170	−56.9		264	181	−57.5		257	174	−57.7						276	173	−58.3	
14,000	279	151	−63.2		232	146	−59.3		295	145	−57.6		253	154	−63.0		245	148	−60.7						263	147	−59.5	
15,000	257	128	−67.1		197	125	−60.3		280	124	−58.8		238	131	−67.4		231	126	−63.0						247	125	−61.2	
16,000	229	109	−70.0		157	107	−61.4		247	105	−59.8		218	111	−70.2		213	108	−65.3						223	107	−62.6	
17,000	204	92	−71.2		98	91	−61.7		214	90	−60.2		184	93	−71.7		187	91	−65.8						199	90	−63.0	
18,000	149	78	−70.4						164	77	−59.6														147	77	−62.5	

	Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[1] (24 m.)				Phoenix, Ariz. (339 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
Surface	358	970	13.8	74	361	980	9.6	77	242	1,016	18.9	76	363	972	19.9	45	362	1,012	5.2	82	365	996	12.1	75	361	988	7.1	77
500	358	958	14.7	71	361	957	10.3	70	242	960	17.0	62	363	954	23.8	36	362	955	6.3	71	365	958	12.2	68	361	956	6.8	74
1,000	358	902	13.6	65	361	901	9.0	66	242	906	14.8	54	363	901	21.5	32	362	898	4.2	70	365	902	10.0	67	361	900	4.9	72
1,500	358	850	11.6	62	361	848	7.3	63	241	854	12.6	49	363	850	17.9	32	362	845	2.0	71	365	850	7.8	66	361	846	3.0	70
2,000	358	801	9.6	58	361	798	5.2	59	240	804	10.5	42	363	801	14.0	33	362	794	0.0	68	365	799	5.9	61	361	795	1.1	66
2,500	358	754	7.2	54	359	750	2.8	55	239	757	7.9	40	362	754	10.3	35	362	745	−2.1	63	365	752	3.5	58	361	747	−0.9	62
3,000	358	709	4.4	50	359	705	0.1	53	237	712	5.4	38	361	710	6.8	36	361	700	−4.5	61	365	706	1.0	55	361	701	−3.4	60
4,000	352	626	−1.6	47	358	622	−5.7	50	223	629	−0.3	37	358	628	0.4	36	351	616	−9.6	56	361	623	−4.4	52	357	617	−8.9	55
5,000	342	552	−7.8	44	354	546	−12.0	48	208	555	−6.5	39	355	554	−6.1	36	335	540	−15.5	52	352	548	−10.4	49	352	542	−15.1	53
6,000	339	484	−14.5	41	345	479	−18.8	45	190	487	−12.8	40	350	486	−12.9	36	326	472	−22.0	49	348	481	−16.9	47	346	474	−21.7	51
7,000	329	424	−21.4	40	344	418	−25.8	44	176	427	−19.4	41	344	426	−20.0	34	315	411	−28.6	46	348	420	−23.8	45	337	413	−28.6	49
8,000	329	369	−28.7	39	340	363	−33.0		123	373	−26.3		339	372	−27.3	33	303	357	−35.3		343	365	−30.8		331	358	−35.8	
9,000	321	320	−36.0		338	314	−40.0		113	324	−33.4		338	322	−34.7	33	282	308	−41.5		340	316	−37.8		318	309	−42.5	
10,000	318	277	−43.0		336	271	−46.2						334	279	−41.9		262	266	−47.0		337	273	−44.4		305	266	−47.9	
11,000	307	238	−49.5		332	233	−51.1						326	240	−48.5		236	228	−51.4		335	235	−50.3		290	229	−51.8	
12,000	295	204	−54.6		326	199	−54.4						321	206	−53.9		208	195	−54.3		326	202	−54.4		267	196	−54.1	
13,000	278	174	−58.1		318	170	−56.4						314	176	−57.7		177	167	−55.2		308	172	−57.0		244	167	−55.4	
14,000	257	148	−60.7		302	145	−57.7						308	150	−60.7		137	142	−56.1		284	147	−59.0		210	143	−56.2	
15,000	246	126	−63.4		278	124	−59.1						295	128	−63.8						268	125	−60.7		174	122	−57.4	
16,000	222	107	−65.4		243	106	−60.1						278	110	−66.0						248	106	−62.0		144	105	−58.1	
17,000					186	90	−60.4						241	93	−66.8						200	91	−62.9					
18,000													203	79	−66.1													
19,000													122	67	−64.2													

	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Sault Ste. Marie, Mich. (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Washington, D. C. (25 m.)			
Surface	358	992	18.6	74	348	1,012	15.8	80	355	1,013	25.0	85	363	988	3.6	84	331	1,014	11.1	79	363	945	9.3	68	358	1,014	12.7	72
500	358	959	18.6	72	348	956	15.2	63	355	959	22.5	87	363	955	4.1	78	331	958	9.5	72					358	958	11.6	66
1,000	358	905	16.6	69	347	902	15.5	43	355	906	19.4	87	363	898	2.7	75	331	902	6.8	69	363	900	9.2	63	358	903	9.2	66
1,500	357	853	14.5	67	346	850	14.1	33	355	855	16.5	84	363	844	0.7	73	331	848	4.0	67	363	847	6.4	61	357	850	6.8	68
2,000	357	804	12.5	61	345	801	12.0	28	355	806	14.0	77	363	793	−1.4	70	331	797	1.3	65	363	797	3.2	62	357	799	4.6	67
2,500	357	757	10.4	54	343	754	9.3	27	354	759	12.1	66	363	744	−3.6	66	331	749	−1.6	62	361	749	−0.1	62	356	751	2.4	65
3,000	357	713	7.9	48	340	710	6.5	26	353	715	9.8	57	362	698	−6.0	63	331	703	−4.5	59	358	703	−3.2	63	355	706	0.1	60
4,000	354	631	2.0	45	335	627	0.2	26	348	634	4.7	50	353	614	−11.2	56	330	618	−10.6	54	356	619	−9.3	60	348	623	−5.0	55
5,000	348	557	−4.1	42	330	552	−6.5	30	338	560	−0.8	46	339	538	−17.1	53	328	542	−16.8	53	350	543	−15.7	57	344	548	−10.6	50
6,000	340	490	−10.6	40	319	485	−13.4		331	494	−6.6	43	323	470	−23.6	51	319	474	−23.4	56	344	475	−22.3	54	335	480	−16.8	48
7,000	330	429	−17.4	39	313	425	−20.7		325	434	−13.0	40	302	409	−30.5	47	313	412	−30.4	59	337	414	−29.4	52	319	420	−23.4	46
8,000	324	375	−24.5	38	155	370	−28.4		315	380	−19.9	39	277	355	−37.3		290	357	−37.5		330	358	−36.4	51	300	365	−30.4	44
9,000	321	336	−31.6	37	152	321	−35.9		312	331	−27.0	38	251	306	−43.3		277	308	−44.6		328	309	−43.2		285	316	−37.4	
10,000	314	282	−38.9		135	278	−42.8		307	288	−34.5	37	228	264	−48.1		250	265	−50.9		320	266	−49.1		266	273	−44.1	
11,000	300	244	−46.0		113	239	−49.0		291	249	−42.0		198	227	−51.0		234	227	−55.3		314	229	−53.3		244	235	−50.0	
12,000	281	209	−52.5						277	214	−49.5		176	194	−52.7		211	194	−57.4		301	196	−55.1		227	201	−54.7	
13,000	263	179	−57.9						271	184	−57.0		155	166	−53.5						292	167	−55.7		212	172	−57.9	
14,000	247	152	−62.4						259	156	−64.2		128	142	−54.2						270	143	−55.6		195	146	−60.0	
15,000	228	129	−66.4						244	132	−70.6		105	121	−55.2						257	122	−56.3		172	124	−61.5	
16,000	200	110	−69.9						223	112	−75.3										229	104	−56.8		140	106	−62.9	
17,000	184	93	−71.6						195	94	−77.7										190	89	−57.1		109	90	−62.8	
18,000									175	79	−76.7										126	76	−56.6					
19,000									146	66	−73.9																	
20,000									94	56	−68.9																	

[1] U. S. Navy.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1943

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,620 m.)				Atlanta, Ga. (300 m.)				Apalachicola, Fla. (5 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	357	838	14.6	38	360	984	14.9	72	364	1,018	19.1	81	357	956	4.3	74	340	916	10.8	59	364	1,015	21.0	86	350	990	6.8	79
500					360	961	15.9	66	364	961	18.5	63									364	959	19.6	76	350	957	6.8	71
1,000					360	906	13.9	63	364	907	16.1	59	357	900	5.5	67	340	902	11.8	52	364	905	17.9	61	350	900	4.6	66
1,500					359	854	11.7	62	364	855	13.7	54	356	846	4.1	65	340	850	10.5	45	364	854	15.9	51	350	846	2.1	63
2,000	357	801	14.0	35	359	804	9.3	60	363	805	11.5	48	353	795	2.1	62	340	799	7.6	46	364	804	13.9	44	350	795	−0.1	61
2,500	357	755	10.8	36	359	757	7.0	56	363	758	9.2	46	353	748	−0.3	59	340	752	4.2	48	364	758	11.6	40	350	747	−2.3	55
3,000	357	711	7.2	39	359	712	4.5	53	362	714	6.7	42	353	702	−2.9	58	340	707	1.0	50	364	714	8.8	37	350	701	−4.4	49
4,000	357	628	−0.3	47	348	629	−0.9	47	359	631	1.3	39	353	618	−8.7	55	336	624	−5.6	49	357	632	3.0	35	344	616	−9.5	45
5,000	355	554	−7.6	52	339	554	−6.8	44	355	557	−4.6	34	343	543	−14.9	53	330	548	−12.2	48	351	558	−3.2	33	339	541	−14.9	43
6,000	346	486	−14.4	50	333	487	−13.2	42	349	490	−10.8	----	338	475	−21.7	51	327	480	−19.1	47	344	491	−9.6	32	335	474	−21.2	----
7,000	339	426	−21.1	45	323	426	−20.0	41	344	429	−17.5	----	332	414	−28.8	47	317	419	−26.3	46	341	431	−16.4	34	322	413	−27.7	----
8,000	332	371	−28.1	----	313	372	−27.1	42	338	375	−24.5	----	325	359	−35.8	----	303	364	−33.6	----	336	376	−23.5	----	306	358	−34.6	----
9,000	320	322	−35.4	----	303	323	−34.4	----	327	326	−31.9	----	315	310	−42.6	----	275	315	−40.7	----	332	327	−30.9	----	277	310	−40.6	----
10,000	304	278	−42.5	----	292	280	−41.5	----	315	283	−39.2	----	294	267	−48.1	----	247	272	−47.1	----	328	284	−38.4	----	254	267	−46.2	----
11,000	276	240	−48.6	----	277	241	−48.1	----	304	244	−46.2	----	277	229	−51.8	----	217	233	−52.1	----	321	245	−45.9	----	220	230	−50.0	----
12,000	258	206	−53.7	----	255	207	−53.6	----	284	209	−52.4	----	266	196	−53.8	----	190	200	−55.2	----	301	210	−52.8	----	202	198	−52.0	----
13,000	235	176	−57.2	----	225	177	−57.9	----	266	179	−57.5	----	248	168	−54.4	----	158	170	−56.0	----	286	180	−59.0	----	190	169	−53.9	----
14,000	207	150	−60.4	----	199	151	−61.5	----	228	152	−62.1	----	220	144	−54.9	----	116	146	−56.4	----	264	153	−64.6	----	174	145	−56.2	----
15,000	185	128	−63.4	----	173	128	−64.7	----	185	130	−65.9	----	175	123	−56.6	----	98	124	−57.9	----	241	130	−69.2	----				
16,000	158	109	−65.2	----	138	109	−66.6	----	134	110	−68.1	----									214	110	−72.6	----				
17,000	112	92	−65.6	----																	145	92	−73.6	----				

Altitude (meters) m. s. l.	Caribou, Maine (191 m.)				Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich. (217 m.)				El Paso, Tex. (1,195 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	359	991	1.1	84	355	1,017	15.4	86	365	838	9.3	54	362	991	6.5	82	365	882	18.0	39	350	810	7.4	45	360	887	7.5	54
500	359	953	1.9	75	355	961	16.4	70					362	958	7.3	70												
1,000	359	896	0.0	72	353	906	14.1	64					362	901	5.2	66												
1,500	359	841	−2.0	71	355	854	11.7	62					362	847	3.0	63	365	851	18.6	35					360	848	7.4	50
2,000	359	790	−3.9	68	355	804	9.5	56	365	800	10.2	45	362	796	1.0	55	365	802	15.6	35	350	801	8.4	53	359	797	4.5	50
2,500	359	741	−5.9	62	355	756	7.1	52	365	753	7.2	44	362	748	−0.9	50	365	756	12.2	36	350	754	7.6	50	359	749	1.4	53
3,000	359	695	−8.1	60	355	712	4.7	49	365	708	3.9	46	362	702	−3.2	48	365	712	8.6	38	350	709	4.1	49	357	704	−2.0	56
4,000	348	610	−13.1	55	344	629	−0.7	45	364	625	−3.1	51	360	618	−8.6	47	365	630	1.4	42	348	626	−3.0	48	356	620	−8.5	58
5,000	340	535	−18.9	53	335	554	−6.5	43	364	551	−10.4	54	353	542	−14.4	44	350	556	−5.7	41	345	551	−10.0	49	355	544	−15.0	57
6,000	334	467	−25.2	51	321	487	−12.8	41	362	483	−17.5	53	347	475	−20.8	44	342	488	−12.3	37	340	483	−17.1	48	347	476	−21.7	56
7,000	323	406	−31.6	49	315	427	−19.4	38	355	422	−24.4	48	342	414	−27.5	----	329	428	−19.0	----	333	422	−24.2	46	340	415	−28.7	----
8,000	307	352	−38.0	----	302	372	−26.4	38	339	366	−31.9	----	335	359	−34.3	----	315	373	−26.0	----	316	367	−31.6	43	327	360	−36.2	----
9,000	290	304	−43.9	----	293	323	−33.4	38	325	317	−39.2	----	318	311	−40.8	----	305	324	−33.3	----	301	318	−39.0	----	305	311	−43.1	----
10,000	266	261	−48.1	----	277	280	−40.5	----	305	274	−46.0	----	302	268	−46.4	----	284	281	−40.7	----	290	274	−45.6	----	272	268	−49.0	----
11,000	246	225	−50.8	----	253	242	−47.1	----	282	235	−51.6	----	287	231	−50.9	----	268	242	−47.5	----	275	236	−51.1	----	249	230	−53.6	----
12,000	219	193	−52.3	----	225	207	−52.8	----	258	202	−55.3	----	268	198	−53.1	----	255	208	−53.1	----	258	202	−55.0	----	218	197	−55.5	----
13,000	203	165	−53.2	----	193	178	−57.3	----	240	172	−57.8	----	251	170	−55.1	----	236	178	−56.3	----	252	172	−57.7	----	193	168	−55.5	----
14,000	181	142	−54.7	----	165	152	−61.7	----	203	147	−60.2	----	235	145	−56.5	----	202	151	−62.1	----	210	147	−60.0	----	165	144	−55.8	----
15,000	153	122	−55.9	----	140	129	−65.3	----	171	125	−62.0	----	203	124	−58.6	----	184	129	−65.7	----	183	125	−61.7	----	135	123	−56.6	----
16,000									151	107	−63.4	----	159	106	−59.7	----	150	109	−68.6	----	163	107	−63.4	----	103	105	−57.3	----
17,000																					112	91	−64.1	----				

Altitude (meters) m. s. l.	Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Medford, Oreg. (409 m.)				Miami, Fla. (4 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	343	998	10.3	82	364	974	2.3	77	361	996	7.3	83	360	1,018	18.0	86	327	1,012	9.9	75	363	969	13.6	61	361	1,018	21.5	85
500	343	960	11.6	68	364	955	2.9	72	361	958	8.4	69	360	960	17.5	67	327	957	9.6	62	363	959	13.6	60	361	961	20.4	83
1,000	343	904	9.2	66	364	898	1.3	68	361	901	6.5	64	360	906	15.6	58	327	901	7.2	61	363	903	12.0	57	361	907	17.3	82
1,500	343	851	6.6	66	364	844	−0.5	67	360	848	4.6	61	360	854	13.7	51	327	848	4.8	60	363	851	9.0	58	361	856	14.7	76
2,000	342	800	4.2	61	364	792	−2.2	62	359	797	2.7	55	360	804	11.8	44	325	797	2.7	57	361	801	5.8	60	361	806	12.5	67
2,500	342	752	1.9	56	364	744	−4.4	57	357	749	0.6	50	360	757	9.3	41	325	749	0.5	53	361	753	3.1	59	361	759	10.3	60
3,000	341	707	−0.4	51	364	698	−6.8	55	356	704	−1.6	48	360	713	6.8	37	325	704	−1.8	50	360	708	0.5	56	361	715	7.8	55
4,000	336	623	−5.4	46	362	613	−12.3	51	352	620	−7.2	48	360	631	1.1	36	320	620	−6.9	45	359	624	−5.3	50	353	633	2.6	50
5,000	332	548	−11.2	44	358	537	−18.2	48	348	545	−13.0	47	352	556	−5.1	33	318	545	−12.7	44	354	549	−11.7	47	347	559	−3.1	46
6,000	331	480	−17.4	42	353	469	−24.8	46	342	477	−19.4	45	350	489	−11.6	----	315	477	−19.0	----	347	481	−18.3	45	341	492	−9.3	44
7,000	328	419	−24.0	43	346	408	−31.5	----	336	416	−26.2	46	345	429	−18.4	----	308	417	−25.6	----	340	420	−25.3	44	335	431	−16.1	42
8,000	325	365	−30.8	----	335	353	−38.2	----	325	362	−33.2	----	340	374	−25.5	----	291	362	−32.4	----	332	365	−32.7	43	328	377	−23.1	41
9,000	316	316	−37.7	----	310	305	−44.1	----	310	313	−39.9	----	333	325	−33.0	----	283	313	−39.2	----	319	315	−40.1	----	321	328	−30.2	40
10,000	305	273	−44.4	----	294	262	−48.7	----	284	270	−45.7	----	317	281	−40.2	----	269	271	−45.5	----	304	272	−46.8	----	309	284	−37.4	----
11,000	291	235	−50.3	----	270	225	−51.2	----	269	232	−50.9	----	292	243	−47.1	----	253	233	−50.8	----	295	234	−52.2	----	296	245	−44.6	----
12,000	278	201	−54.8	----	248	194	−52.5	----	249	199	−54.1	----	272	208	−53.3	----	230	199	−54.4	----	280	200	−55.1	----	280	211	−51.5	----
13,000	254	172	−57.7	----	218	166	−53.1	----	228	171	−56.4	----	252	178	−58.3	----	208	171	−57.3	----	260	171	−55.9	----	254	181	−58.0	----
14,000	234	147	−60.2	----	195	142	−53.9	----	193	146	−58.6	----	232	152	−62.8	----	181	146	−59.7	----	236	146	−57.5	----	230	154	−63.7	----
15,000	197	125	−62.4	----	136	122	−54.9	----	157	125	−60.4	----	204	129	−66.6	----	145	125	−60.9	----	211	125	−58.7	----	195	130	−68.2	----
16,000	162	106	−63.8	----									166	109	−69.3	----					176	107	−59.9	----	157	110	−71.8	----
17,000	114	91	−63.8	----									99	93	−70.2	----					125	91	−60.2	----	104	93	−73.7	----
18,000																					80	78	−59.5	----				

[1] U. S. Navy.

Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during the year 1943—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

Altitude (meters) m. s. l.	Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (2 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				Pensacola, Fla.[2] (24 m.)				Phoenix, Ariz. (339 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	351	997	14.0	70	290	1,018	14.6	75	365	1,016	14.0	75	353	971	14.5	64	345	982	9.5	72	----	----	----	----	358	972	20.8	45
500	351	960	14.2	60	290	960	13.3	63	365	958	13.5	61	353	958	15.3	50	345	959	9.9	63	----	----	----	----	358	955	24.0	35
1,000	351	905	11.6	60	290	905	11.0	60	365	903	13.4	44	353	904	14.7	52	345	902	8.6	56	----	----	----	----	358	901	22.0	30
1,500	351	852	9.3	57	290	852	8.6	58	365	851	11.6	37	353	852	13.0	51	345	849	7.0	51	----	----	----	----	358	851	18.1	32
2,000	351	802	7.3	52	290	801	6.2	53	365	801	9.1	34	353	802	10.9	47	345	799	5.2	48	----	----	----	----	358	802	14.1	35
2,500	351	754	5.1	48	290	754	4.0	48	364	753	6.5	31	349	754	8.4	43	345	751	3.0	44	----	----	----	----	358	755	10.4	36
3,000	351	709	2.8	48	288	709	1.4	44	363	708	3.6	30	348	711	5.7	41	345	706	0.5	44	----	----	----	----	358	711	6.8	38
4,000	346	626	−2.7	41	286	625	−4.1	40	354	626	−2.7	30	335	628	−0.4	39	344	622	−5.3	44	----	----	----	----	355	629	0.1	37
5,000	341	551	−8.7	39	279	550	−10.1	39	350	551	−9.2	34	325	553	−6.9	38	342	548	−11.5	43	----	----	----	----	347	554	−6.4	37
6,000	332	484	−15.0	----	268	482	−16.5	----	350	483	−16.2	----	317	486	−13.6	36	341	480	−18.1	41	----	----	----	----	343	487	−13.2	35
7,000	328	423	−21.8	----	253	422	−22.9	----	342	422	−23.5	----	308	426	−20.5	36	337	419	−25.0	----	----	----	----	----	334	426	−20.2	34
8,000	319	368	−29.0	----	----	----	----	----	340	367	−30.9	----	294	371	−27.8	----	334	364	−32.2	----	----	----	----	----	327	372	−27.5	----
9,000	306	319	−36.0	----	----	----	----	----	328	318	−38.2	----	278	322	−35.1	----	325	315	−39.1	----	----	----	----	----	323	322	−34.8	----
10,000	289	276	−43.0	----	----	----	----	----	316	275	−45.0	----	258	279	−42.0	----	309	272	−45.3	----	----	----	----	----	313	279	−41.9	----
11,000	265	238	−49.3	----	----	----	----	----	288	236	−50.9	----	228	240	−48.7	----	300	234	−50.6	----	----	----	----	----	305	240	−48.3	----
12,000	244	204	−54.4	----	----	----	----	----	267	202	−55.1	----	----	----	----	----	293	201	−54.2	----	----	----	----	----	292	206	−53.6	----
13,000	223	175	−58.2	----	----	----	----	----	234	173	−57.0	----	----	----	----	----	238	172	−56.3	----	----	----	----	----	275	176	−57.4	----
14,000	200	149	−61.3	----	----	----	----	----	213	148	−59.3	----	----	----	----	----	242	147	−58.3	----	----	----	----	----	242	150	−60.6	----
15,000	173	127	−64.8	----	----	----	----	----	184	126	−61.5	----	----	----	----	----	209	125	−60.2	----	----	----	----	----	220	128	−63.6	----
16,000	143	108	−66.8	----	----	----	----	----	150	107	−63.1	----	----	----	----	----	183	107	−61.3	----	----	----	----	----	186	109	−65.8	----
17,000	98	92	−66.2	----	----	----	----	----	108	92	−62.8	----	----	----	----	----	127	91	−61.2	----	----	----	----	----	----	----	----	----

	Portland, Maine (20 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Sault St. Marie, Mich. (221 m.)			
Surface	354	1,013	4.7	79	364	998	11.9	71	363	999	6.0	88	354	989	18.7	70	354	1,012	16.7	83	357	1,014	24.7	84	352	989	2.4	89
500	354	955	5.8	70	364	959	11.8	61	363	957	6.0	67	354	958	18.7	65	354	957	15.6	61	357	960	21.6	84	352	956	3.0	80
1,000	354	898	3.5	68	364	903	9.7	60	363	900	4.3	64	354	906	16.5	63	352	902	15.5	42	355	906	18.5	81	352	898	1.3	76
1,500	354	845	1.4	68	364	850	7.7	55	362	846	2.6	60	354	854	14.6	58	351	850	13.8	35	354	855	15.6	75	352	844	−0.8	74
2,000	353	793	−0.8	67	364	800	5.7	51	362	795	0.7	54	354	804	12.5	59	351	801	11.5	32	354	805	13.2	65	352	792	−2.8	71
2,500	353	745	−3.0	64	363	752	3.6	47	362	747	−1.4	50	354	758	10.3	41	351	754	8.7	29	352	759	11.1	53	352	744	−4.8	67
3,000	351	699	−5.2	61	363	707	1.3	45	361	701	−3.8	47	354	713	7.7	39	350	709	5.7	29	348	715	8.9	43	352	698	−7.0	64
4,000	340	615	−10.3	56	355	624	−4.2	44	354	617	−9.3	45	354	631	1.8	36	347	627	−0.5	30	338	633	3.8	36	344	613	−12.1	60
5,000	329	540	−16.1	53	352	549	−10.2	43	349	542	−15.3	45	352	557	−4.4	35	345	553	−7.0	----	319	559	−1.8	33	329	537	−17.8	56
6,000	318	472	−22.3	50	347	481	−16.7	----	345	474	−21.7	----	349	490	−10.9	----	338	485	−13.7	----	312	492	−7.7	32	310	469	−24.2	54
7,000	308	411	−28.7	48	343	421	−23.5	----	338	412	−28.8	----	346	429	−17.6	----	335	425	−20.8	----	304	432	−14.3	32	297	409	−30.7	51
8,000	291	357	−35.2	----	334	366	−30.6	----	325	358	−35.6	----	332	375	−24.8	----	188	371	−28.0	----	286	379	−21.1	----	283	354	−37.3	----
9,000	270	309	−41.3	----	316	317	−37.8	----	314	310	−42.1	----	322	325	−32.2	----	186	321	−35.3	----	274	329	−28.5	----	264	306	−43.3	----
10,000	247	266	−46.7	----	309	274	−44.6	----	290	267	−47.6	----	307	282	−39.5	----	182	278	−42.5	----	264	286	−36.1	----	250	264	−48.2	----
11,000	218	230	−50.8	----	292	236	−50.5	----	268	230	−50.9	----	288	243	−46.7	----	164	240	−48.7	----	249	247	−43.6	----	227	227	−50.9	----
12,000	197	197	−53.4	----	276	202	−54.6	----	239	197	−53.0	----	272	209	−53.1	----	158	206	−54.0	----	229	213	−51.2	----	211	195	−52.4	----
13,000	164	169	−54.9	----	260	173	−57.3	----	220	168	−54.3	----	257	178	−58.5	----	148	176	−57.8	----	219	182	−58.5	----	189	167	−53.5	----
14,000	137	144	−56.8	----	233	148	−59.7	----	195	144	−55.8	----	228	152	−63.0	----	----	----	----	----	199	155	−64.8	----	168	143	−54.7	----
15,000	110	124	−58.9	----	210	126	−62.3	----	163	123	−57.1	----	196	129	−67.1	----	----	----	----	----	182	131	−69.9	----	----	----	----	----
16,000	----	----	----	----	176	107	−63.8	----	----	----	----	----	154	110	−69.5	----	----	----	----	----	171	111	−73.7	----	----	----	----	----
17,000	----	----	----	----	120	92	−64.2	----	----	----	----	----	112	93	−69.9	----	----	----	----	----	151	93	−74.8	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	102	79	−73.4	----	----	----	----	----

	Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)				Swan Island, West Indies[2] (10 m.)				Tongue Point, Oreg.[2] (21 m.)				Washington, D. C. (25 m.)			
Surface	316	1,016	12.3	70	358	947	9.0	67	----	----	----	----	----	----	----	----	361	1,015	12.7	68
500	316	959	10.3	64	----	----	----	----	----	----	----	----	----	----	----	----	361	959	11.6	59
1,000	316	903	7.8	63	358	902	8.4	59	----	----	----	----	----	----	----	----	361	903	9.1	60
1,500	316	850	5.1	63	358	849	6.0	56	----	----	----	----	----	----	----	----	361	850	6.5	62
2,000	313	799	2.3	62	358	798	3.1	55	----	----	----	----	----	----	----	----	361	799	4.2	61
2,500	310	751	−0.5	59	357	750	0.1	55	----	----	----	----	----	----	----	----	361	752	2.2	54
3,000	308	705	−3.4	57	352	704	−2.9	54	----	----	----	----	----	----	----	----	361	706	0.1	46
4,000	305	620	−9.2	58	347	620	−8.9	49	----	----	----	----	----	----	----	----	359	623	−5.3	42
5,000	299	544	−15.5	60	346	544	−15.1	48	----	----	----	----	----	----	----	----	356	548	−11.1	41
6,000	292	476	−22.2	----	341	476	−21.8	----	----	----	----	----	----	----	----	----	352	480	−17.4	----
7,000	282	415	−29.1	----	330	415	−28.9	----	----	----	----	----	----	----	----	----	350	419	−24.0	----
8,000	248	360	−36.4	----	324	359	−36.2	----	----	----	----	----	----	----	----	----	340	365	−30.9	----
9,000	242	310	−43.5	----	313	310	−43.2	----	----	----	----	----	----	----	----	----	330	316	−37.6	----
10,000	226	267	−49.7	----	289	267	−49.2	----	----	----	----	----	----	----	----	----	310	273	−44.2	----
11,000	187	230	−53.4	----	264	230	−53.6	----	----	----	----	----	----	----	----	----	271	235	−49.9	----
12,000	169	197	−55.5	----	240	197	−54.6	----	----	----	----	----	----	----	----	----	229	202	−53.7	----
13,000	145	168	−56.1	----	224	168	−54.5	----	----	----	----	----	----	----	----	----	212	173	−56.7	----
14,000	106	143	−56.2	----	193	144	−55.0	----	----	----	----	----	----	----	----	----	187	147	−59.4	----
15,000	----	----	----	----	160	123	−56.1	----	----	----	----	----	----	----	----	----	160	125	−61.2	----
16,000	----	----	----	----	128	105	−57.0	----	----	----	----	----	----	----	----	----	----	----	----	----

[1] U. S. Navy.

[2] Insufficient data.

NOTE.—All data are based on observations for 12 months, except at Pensacola, for 1942, for which only 11 months were available, insufficient observations having been taken during September.

At some stations, higher levels were missing during 1 or 2 months. They were not published for any level where observations were missing for more than 1 month in the same season, or more than 2 months during the year.

RIVER STAGES AND FLOODS

By C. R. JORDAN

DRY weather persisted over most of the country during January, precipitation being below normal except for a few central States from Texas northward through South Dakota. It was extremely dry in these States until near the close of the month when heavy precipitation fell in the Great Plains area. This single storm brought the monthly totals to more than twice the normal in South Dakota, which had the second greatest January amount of record, and Nebraska the greatest of record. The eastern boundary of the heavy precipitation was sharply delineated as shown by the contrast between Kansas with 158 percent of normal and the adjoining state of Missouri with only 25 percent of normal. It was the second driest January in 107 years at St. Louis. Extremely dry weather continued in the Ohio Valley States. Ohio and Indiana had the driest January of record, and Illinois the driest since 1931.

The snow cover was reduced over most sections east of the Rocky Mountains during January, due to the influence of mild weather and the lack of any substantial new snows. Practically the only gains were in the Rocky Mountains and in the northern and extreme western portions of the Great Plains. There were about two feet of snow in extreme northwestern Maine, 40 inches at Lake Placid in the Adirondacks of New York, and only from 1 to 2 inches in the mountains of western Pennsylvania at the close of the month. A few stations in northern Michigan and Minnesota reported a foot of snow but even in these areas there was much bare ground. Some amounts in in the West were 58 inches at Cumbres, Colo.; 50 inches at Silver Lake, Utah; 84 inches at Paradise Inn., Wash.; and 48 inches at Soda Springs, Calif. The snow cover is generally below normal.

Stream flow during January was below normal in most of the country and ground-water storage generally decreased. An outstanding example of the effect of the continued dry weather on ground-water levels, as shown by surveys of the U. S. Geological Survey, is the ground-water level in the Santa Cruz valley area of Arizona—which, at the end of January, was 6.54 feet lower than at the end of January 1942, and 10.34 feet lower than at the same time in 1941. As might be expected, there was little flooding during the month.

Atlantic Slope drainage.—Light flooding occurred at widely scattered points along the South Atlantic Coast. Moderately heavy rains falling on already saturated soil, about the middle of the month, caused moderate overflows in the Neuse, Haw, and Cape Fear Rivers. No damage was reported. The same storm produced a rapid rise in the Pee Dee River which rose slightly above flood stage at Mars Bluff Bridge, S. C., on the 20th. The only loss reported was that caused by the suspension of business, which is estimated at $500. The Broad River just reached flood stage at Blairs, S. C., on January 4, but no damage occurred. Light flooding occurred along the lower Savannah River at the beginning of the month and again near the middle of the month. Damage was small. The greatest loss, estimated at $250, was due to the suspension of business and the cost of moving lumber to high land.

East Gulf of Mexico drainage.—The Pearl River just reached flood stage at Pearl River, La., on January 20th. No damage occurred.

West Gulf of Mexico drainage.—Light flooding occurred soon after the middle of January in the Sabine and Trinity Rivers and the Bayou Nezpique. The only losses reported were in the Trinity River Basin where livestock and other movable property suffered a loss of about $1,000 and intangible losses were estimated at $1,500.

FLOOD-STAGE REPORT FOR JANUARY 1944

[All dates in January]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
Neuse:	*Feet*			*Feet*	
Smithfield, N. C.	13	4	5	13.5	5
		16	19	16.0	17
Goldsboro, N. C.	14	19	23	15.7	22
Kinston, N. C.	14	24	25	14.1	24
Haw: Moncure, N. C.	20	16	16	20.0	16
Cape Fear: Elizabethtown, N. C.	20	5	6	23.2	5
		16	20	27.0	18
Pee Dee: Mars Bluff Bridge, S. C.	17	19	20	17.2	20
Broad: Blairs, S. C.	14	4	4	15.0	4
Savannah: Clyo, Ga.	11	4	7	11.2	5
		9	(1)	12.4	15
EAST GULF OF MEXICO DRAINAGE					
Pearl: Pearl River, La.	12	20	20	12.0	20
WEST GULF OF MEXICO DRAINAGE					
Bayou Nezpique: Basile, La.	18	1	23	21.8	17–18
Sabine: Logansport, La.	25	18	22	25.8	20
Trinity: Liberty, Tex.	24	16	20	25.2	17

[1] No record after 21st.

CLIMATOLOGICAL DATA

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
			Monthly extremes								Greatest monthly		Least monthly	
	Section average	Departure from the normal	Station	Highest	Date	Station	Lowest	Date	Section average	Departure from the normal	Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	47.1	+0.6	Wetumpka	83	27	Huntsville	1	10	3.62	−1.23	Evergreen	6.87	Oneonta	2.19
Arizona	40.6	−1.4	3 stations	81	[1] 19	Alpine	−9	8	.79	−.51	Hilltop	2.60	3 stations	.00
Arkansas	42.2	+1.0	Arkadelphia	82	26	Lead Hill	−15	9	2.50	−1.78	Camden	5.36	Corning	.58
California	44.6	+.7	2 stations	92	[1] 17	Ellery Lake	−14	4	3.14	−2.06	Cummings	12.26	3 stations	.00
Colorado	23.1	−.8	Holly	72	24	Alamosa	−36	8	1.13	+.34	Wolf Creek Pass	7.23	Walden	.08
Florida	57.4	−1.6	Bushnell	92	28	Vernon	21	21	2.50	−.26	Perry	5.45	Clewiston	.25
Georgia	46.4	−.6	4 stations	83	[1] 27	Blairsville	14	1	3.97	−.28	Clayton	5.78	Savannah Beach	2.24
Idaho	21.5	−2.4	Kooskia	59	17	Landmark	−34	[1] 4	.93	−1.21	Roland	3.58	Cottonwood	.05
Illinois	33.3	+5.5	East St. Louis	74	28	Freeport	−13	8	.57	−1.74	Rockford	1.78	2 stations	T
Indiana	33.6	+4.5	2 stations	73	27	2 stations	−2	13	.62	−2.39	Marengo	1.56	Whitestown	.11
Iowa	30.1	+11.4	Missouri Valley	70	25	5 stations	−15	8	1.06	−.03	Ames	2.24	Keosauqua	.15
Kansas	34.4	+4.5	Columbus	73	26	Burr Oak (near)	−21	8	1.09	+.40	Scott City	2.55	2 stations	.32
Kentucky	37.7	+1.9	6 stations	75	27	Farmers	0	9	1.60	−2.74	Cumberland	3.08	Uniontown	.82
Louisiana	50.3	−1.3	North Livingston	83	31	2 stations	12	[1] 9	7.50	+2.65	Kisatchie	14.99	Jones	4.60
Maryland-Delaware	34.9	+1.7	2 stations	74	27	Grantsville, Md.	−13	9	3.35	.00	Snow Hill, Md.	5.96	Mount Savage Summit, Md.	1.81
Michigan	27.8	+6.8	3 stations	66	[1] 25	Watersmeet	−17	7	1.17	−.79	Painesdale	3.35	Mio	.30
Minnesota	23.1	+13.5	St. Peter	65	25	2 stations	−26	7	.60	−.15	Canby	1.55	Argyle	.03
Mississippi	46.9	−.3	Waynesboro	82	27	do	9	9	4.25	−.75	Woodville	7.25	Sarah	1.94
Missouri	35.7	+4.9	Union	77	28	Anderson	−6	9	.53	−1.70	Seligman	1.82	Licking (near)	.04
Montana	25.4	+5.9	Winifred	69	[1] 18	West Yellowstone	−33	7	.30	−.62	Heron	2.46	6 stations	.00
Nebraska	28.9	+5.8	Lexington	71	21	Ewing	−21	8	1.37	+.83	Curtis	2.42	2 stations	.41
Nevada	27.2	−2.4	Lathrop Wells	76	19	2 stations	−26	[1] 4	1.01	−.20	Marlette Lake	5.60	Rattlesnake	.04
New England	23.8	+1.3	Norwalk, Conn	63	27	Lemington, Vt.	−32	17	1.72	−1.69	Bridgeport, Conn	4.02	Millinocket, Maine	.07
New Jersey	32.5	+1.6	Pleasantville	69	27	Charlotteburg	−10	17	3.50	−.15	Elizabeth	5.35	Layton	1.86
New Mexico	30.2	−3.3	Obar	88	25	Eagle Nest	−32	13	.74	+.16	Fort Stanton	4.08	Obar	.00
New York	26.0	+3.0	Addison	65	26	Newcomb	−27	17	1.68	−1.20	New York	5.32	Burdett	.25
North Carolina	41.1	−.3	Tryon	83	28	Henderson	−2	10	3.60	−.13	Elizabeth City	5.07	Jefferson	.81
North Dakota	21.8	+15.1	Fryburg	61	23	Mohall	−26	6	.37	−.10	Marmarth	1.24	4 stations	T
Ohio	32.4	+3.9	2 stations	70	27	McArthur	0	13	.96	−2.03	Warren No. 1	2.19	Van Wert	.39
Oklahoma	39.4	+1.2	Poteau	78	22	Willburton	−12	9	1.69	+.27	Eufaula	4.77	Miami	.20
Oregon	30.4	−1.3	3 stations	68	[1] 16	Chemult	−20	3	2.12	−1.66	Valsetz	13.05	Joseph	.13
Pennsylvania	30.6	+2.2	York	68	26	3 stations	−12	9	2.12	−1.04	South Mountain	4.29	Centerville	.35
South Carolina	45.6	−.3	4 stations	83	28	Society Hill	16	11	3.67	+.11	Edgefield	5.65	Greenville	1.57
South Dakota	26.6	+9.8	DeSmet	67	18	2 stations	−20	[1] 5	1.26	+.70	Harveys Ranch	4.07	Pollock	.23
Tennessee	40.1	+1.1	Celina	76	27	Tullahoma	4	10	2.56	−2.17	Monteagle	4.29	Union City	1.19
Texas	47.0	−1.2	Mission	90	[1] 25	Stratford	−6	3	3.68	+1.88	Dialville	10.74	Midland	.20
Utah	19.8	−5.3	St. George	61	[1] 18	Ouray	−31	30	1.65	+.41	Silver Lake (Brighton)	3.48	Callao	T
Virginia	37.7	+1.2	2 stations	79	28	Holland	0	10	2.65	−.61	Langley Field	4.83	Elkwood	.88
Washington	31.9	+1.4	Startup	63	19	Bumping Lake	−12	6	3.29	−1.64	Spruce	20.39	Trinidad	.15
West Virginia	33.2	+.6	2 stations	79	[1] 27	Seneca State Forest	−13	9	2.11	−1.46	Man	3.15	Brandywine	.80
Wisconsin	25.7	+10.4	Racine	64	26	Coddington	−20	7	.95	−.29	Madison	1.68	Neillsville	.47
Wyoming	18.9	−1.0	2 stations	64	[1] 13	Lamar Ranger Station	−39	4	.84	+.05	Grassy Lake Dam	3.25	Powell	.18
Alaska [December]	13.3	+8.1	Sitka	53	13	Allakaket	−56	17	5.15	+2.64	Little Port Walter	43.54	Wainwright	.04
Hawaii	70.0	+1.3	7 stations	87	[1] 4	Volcano Observatory	43	17	1.89	−6.77	Intake, Wainiha Power Canal.	8.48	19 stations	.00
Puerto Rico	73.3	+.5	Dos Bocas	95	8	Cayey	47	7	2.54	−1.26	La Mina (El Yunque)	9.96	Ponce	.10

[1] Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean max. + mean min. ÷ 2	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*In.*	*In.*	*In.*	*° F.*	*° F.*	*°F.*		*°F.*	*° F.*		*° F.*	*°F.*	*° F.*	*%*	*In.*	*In.*		*Miles*								*0–10*	*In.*	*In.*	
New England							26.7	+2.7									74	2.19	−1.3										5.8			
Eastport	75	67	85	29.91	30.01	+0.01	24.6	+4.2	44	21	31	5	9	18	24	16	67	0.91	−3.0	7	11.5	w.	33	e.	7	14	9	8	4.9	10.4	3.5	0
Greenville, Maine	1,070	6	41	28.82	30.05	.....	14.4	+2.2	44	27	26	−22	17	3	44	10	...	1.02	−1.9	7	.....	nw.	.....	.....	.....	7	10	14	.....	10.3	14.5	0
Portland, Maine	103	5	43	29.92	30.05	.00	22.7	+.3	52	27	33	−13	9	13	43	16	80	2.28	−1.7	6	8.5	n.	30	e.	6	12	9	10	5.3	17.6	3.3	0
Concord	280	4	45	29.74	30.07	+.02	22.5	+3.5	51	27	33	−20	17	12	53	14	71	1.79	−1.2	7	7.7	nw.	33	nw.	30	10	10	11	5.7	23.6	3.8	0
Burlington	405	6	51	29.61	30.09	+.04	20.6	+1.8	41	27	29	−13	9	12	33	15	82	1.77	.0	8	8.2	s.	30	s.	11	6	9	16	6.8	16.6	3.0	0
Boston	124	23	62	29.91	30.06	+.01	31.0	+3.1	58	27	37	6	9	25	22	21	68	2.03	−1.6	8	12.3	nw.	40	ne.	4	6	13	12	6.2	5.1	T	0
Nantucket	12	11	59	30.02	30.05	+.01	32.8	+1.5	49	27	38	13	9	28	18	27	83	3.58	−.2	13	12.1	nw.	44	ne.	4	10	6	15	6.0	4.6	.0	0
Block Island	26	11	46	30.03	30.07	.00	32.7	+1.7	51	27	38	12	9	27	18	26	75	3.04	−.7	10	19.1	nw.	56	ne.	4	11	7	13	5.7	1.1	.0	0
Providence	159	46	60	29.89	30.08	+.02	31.7	+4.5	61	27	38	8	9	25	24	21	72	2.58	−1.1	8	9.4	nw.	28	nw.	7	8	12	11	5.9	.3	.0	0
Hartford	159	5	44	29.91	30.11	+.04	29.4	+3.9	57	27	38	5	17	21	30	20	72	1.51	−2.4	7	9.3	nw.	30	nw.	30	8	14	9	5.8	.7	.0	0
New Haven	107	5	39	29.97	30.11	+.03	30.8	+3.4	60	27	38	10	9	23	26	22	72	3.60	−.1	7	8.0	ne.	29	se.	6	8	10	13	6.1	1.3	T	0
Middle Atlantic States							35.1	+3.2									73	3.08	−0.1										6.2			
Albany	97	26	46	29.99	30.10	+.03	24.5	+4.4	48	27	32	−14	17	17	38	18	77	1.11	−1.3	5	9.2	n.	28	nw.	30	7	7	17	6.5	11.4	.2	0
Binghamton	871	60	79	29.14	30.12	+.04	28.8	+4.7	56	27	37	0	17	21	34	20	78	.97	−1.5	6	6.0	w.	24	w.	31	3	11	17	7.5	4.6	.4	0
New York	314	415	434	29.74	30.12	+.02	34.2	+3.3	61	27	40	12	9	28	27	22	65	5.32	+1.7	9	15.7	nw.	51	nw.	30	8	11	12	5.8	2.8	T	1
Harrisburg	374	30	49	29.72	30.15	+.05	32.8	+3.8	65	28	41	8	16	25	31	24	71	2.97	−.1	9	7.7	w.	31	nw.	29	8	7	16	6.5	5.7	.0	0
Philadelphia	114	6	56	30.00	30.14	+.05	34.0	+2.9	66	26	42	12	9	26	34	26	76	2.99	−.3	9	10.0	nw.	37	e.	3	5	10	16	6.7	3.2	.0	0
Reading	323	47	306	29.77	30.15	.....	34.2	+3.0	65	27	42	9	17	27	31	.....	...	2.90	−.7	10	11.0	nw.	40	ne.	3	9	8	14	6.1	4.2	.0	0
Scranton	805	72	104	29.22	30.12	+.03	30.6	+4.0	57	26	38	8	9	24	25	.....	...	.81	−2.2	6	6.8	n.	26	nw.	31	4	14	13	6.4	1.1	T	0
Atlantic City	52	37	172	30.05	30.13	+.02	36.0	+3.5	64	27	43	14	9	29	31	29	78	4.45	+1.0	8	16.8	w.	63	e.	4	7	12	12	6.0	3.2	.0	0
Trenton	190	89	107	29.91	30.13	.....	33.9	+3.4	65	27	40	12	9	27	32	24	71	3.18	−.1	8	9.6	n.	32	ne.	3	7	9	15	6.2	2.5	.0	0
Baltimore	123	100	215	30.01	30.15	+.03	38.2	+4.4	72	27	45	15	9	31	29	26	70	5.04	+1.5	7	9.3	sw.	36	ne.	3	10	11	10	5.7	5.2	.0	0
Washington	112	56	100	30.02	30.15	+.02	37.4	+4.0	71	26	45	16	9	30	38	26	68	2.96	−.6	7	6.7	nw.	31	nw.	31	5	14	12	6.3	4.1	.0	0
Cape Henry	18	8	54	30.10	30.13	.....	40.0	−.2	76	28	46	18	10	34	26	33	82	3.68	+.5	8	12.2	n.	45	nw.	4	9	9	13	6.1	4.6	.0	0
Lynchburg	686	144	184	29.40	30.16	+.03	40.8	+3.3	77	28	51	16	10	30	38	27	64	2.39	−1.0	6	6.5	nw.	37	nw.	31	10	12	9	5.5	2.1	.0	0
Norfolk	91	80	125	30.04	30.15	+.02	41.7	+1.1	76	28	49	18	10	35	26	32	82	4.47	+1.4	8	9.3	n.	28	se.	3	10	6	15	6.2	4.7	.0	0
Richmond	144	11	52	29.97	30.15	+.01	39.8	+1.9	77	28	49	13	10	30	37	29	73	2.90	−.3	7	7.7	sw.	32	nw.	31	10	11	10	5.5	3.4	.0	0
South Atlantic States							46.4	+0.9									77	3.37	−0.2										5.8			
Asheville	2,253	77	92	27.76	30.18	+.03	39.6	+4.2	68	27	49	15	10	30	33	28	72	2.52	−.6	8	7.6	nw.	27	nw.	31	4	9	18	6.9	9.0	.0	0
Charlotte	779	63	86	29.31	30.17	+.02	43.1	+1.9	79	28	52	22	9	34	26	32	78	3.78	−.2	6	6.2	ne.	33	nw.	31	5	14	12	6.3	1.8	.0	0
Greensboro	886	6	56	29.19	30.17	.....	38.6	.....	78	28	49	12	9	28	35	28	74	3.37	.....	6	7.4	sw.	26	nw.	31	6	14	11	6.0	5.6	.0	0
Hatteras	11	5	50	30.11	30.13	−.01	44.3	−2.8	65	27	50	27	14	38	23	39	88	4.48	+.1	9	13.4	n.	35	nw.	31	10	6	15	6.0	T	.0	0
Raleigh	376	72	69	29.74	30.16	+.03	41.4	+1.6	78	28	51	10	10	32	31	32	78	4.26	+.6	7	7.7	ne.	35	nw.	31	6	13	12	6.3	3.5	.0	1
Wilmington	72	73	107	30.06	30.16	+.02	47.4	+.9	78	28	57	20	10	38	27	38	79	3.43	+.1	6	8.6	n.	37	nw.	31	12	7	12	5.2	T	.0	0
Charleston	48	11	92	30.09	30.15	.00	50.0	−.1	81	28	58	29	10	42	25	40	81	3.30	+.3	7	9.9	n.	26	se.	3	13	7	11	5.0	.8	.0	0
Columbia, S. C.	344	70	91	29.78	30.18	+.03	46.6	+.6	79	28	56	26	10	38	31	35	76	2.66	−.7	7	7.2	ne.	28	sw.	31	10	10	11	5.5	1.3	.8	0
Greenville, S. C.	1,040	18	36	29.03	30.17	.....	43.4	+3.1	77	28	52	26	11	35	30	32	74	1.57	−3.3	7	8.0	ne.	39	ne.	2	6	8	17	6.6	.0	.0	0
Augusta	182	62	77	29.96	30.16	.00	47.8	+.7	80	28	57	27	11	38	32	34	67	4.01	+.1	9	4.9	nw.	22	w.	31	11	8	12	5.6	T	.0	0
Savannah	65	73	152	30.08	30.17	+.02	52.2	+.8	81	28	62	32	10	43	28	40	77	3.23	+.4	6	10.0	w.	32	nw.	3	13	5	13	5.2	.0	.0	0
Jacksonville	43	86	110	30.11	30.16	+.01	54.5	−.9	79	28	64	35	1	46	26	44	82	3.77	+1.0	7	7.4	ne.	26	w.	3	13	7	11	5.0	.0	.0	0
Florida Peninsula							64.1	−1.8									82	1.84	−0.5										4.8			
Key West	21	10	64	30.09	30.12	+.02	67.8	−1.7	80	8	73	51	22	63	17	60	82	1.69	−.3	5	9.8	n.	28	nw.	9	17	7	7	3.9	.0	.0	0
Miami	25	242	249	30.08	30.12	−.01	65.0	−2.9	80	3	72	43	10	58	23	56	85	2.00	−.3	6	12.1	nw.	29	se.	2	12	9	10	5.1	.0	.0	0
Tampa	35	6	43	30.11	30.15	+.03	59.5	−.9	80	28	69	41	22	50	28	50	80	1.84	−.8	6	9.3	ne.	30	s.	8	9	12	10	5.4	.0	.0	0
East Gulf States							48.9	+0.4									78	4.18	−0.5										6.0			
Atlanta	1,173	33	72	28.90	30.17	+.02	44.4	+1.9	72	27	52	23	10	36	32	33	70	3.87	−1.2	7	10.4	nw.	32	w.	31	8	5	18	6.5	T	.0	0
Macon	370	79	87	29.76	30.17	+.01	47.5	+.7	79	28	58	26	11	38	34	36	74	2.77	−1.4	8	6.6	nw.	21	w.	31	10	10	11	5.6	.0	.0	1
Thomasville	273	49	58	29.88	30.18	+.02	51.6	+.6	80	27	63	30	1	41	36	.....	...	3.36	−.7	7	.....	.....	.....	.....	.....	8	8	15	.....	.0	.0	0
Apalachicola	35	11	51	30.11	30.16	.....	53.0	−.7	76	29	61	37	16	45	24	45	82	3.45	−.2	6	8.3	e.	27	e.	8	12	9	10	5.4	.0	.0	0
Pensacola	56	54	79	30.11	30.18	+.04	51.8	−.7	74	31	60	28	10	44	24	42	81	3.94	.0	7	7.3	e.	29	se.	2	9	10	12	5.8	.0	.0	0
Anniston	741	9	.....	.....	.....	.....	45.4	+.8	74	27	55	18	10	36	37	.....	...	2.63	−2.5	7	.....	se.	.....	.....	.....	10	6	15	.....	T	.0	0
Birmingham	700	5	62	29.42	30.19	+.03	44.5	+1.6	77	27	54	22	9	35	37	36	80	2.59	.....	8	7.8	e.	34	se.	2	9	6	16	6.5	.3	.0	0
Mobile	57	86	167	30.10	30.17	+.02	51.2	−.3	75	26	59	30	10	43	30	42	83	3.99	−.9	7	6.0	n.	21	n.	6	8	10	13	6.0	.0	.0	0
Montgomery	218	92	105	29.93	30.18	+.02	49.3	+1.1	78	27	58	27	10	40	30	38	75	4.92	−.3	9	7.1	n.	19	w.	3	9	6	16	6.1	.0	.0	0
Meridian	375	67	92	29.76	30.17	+.01	47.2	+.2	78	27	57	20	10	38	39	38	80	3.39	−1.9	10	5.8	ne.	17	w.	3	10	7	14	5.9	T	.0	1
Vicksburg	247	82	102	29.90	30.17	+.02	48.0	−.2	77	26	56	22	9	40	28	36	80	5.06	−.3	12	8.6	n.	24	e.	2	10	7	14	6.1	2.2	.0	1
New Orleans	53	50	84	30.09	30.15	+.02	53.4	+.2	78	27	61	32	10	46	21	46	78	8.63	+4.3	6	6.6	se.	27	e.	7	11	5	15	5.3	.0	.0	2
West Gulf States							49.5	+0.2									81	4.84	+1.9										6.5			
Shreveport	249	5	64	29.90	30.17	+.03	46.2	+.2	73	24	56	20	15	37	33	40	83	6.35	+2.4	13	9.0	se.	31	w.	27	6	8	17	7.0	3.5	.0	0
Fort Smith	463	57	82	29.67	30.16	+.02	41.5	+2.0	72	27	50	4	9	33	30	34	76	2.07	−.5	6	6.8	e.	25	w.	27	11	7	13	5.7	8.8	.0	1
Little Rock	357	5	58	29.80	30.19	+.04	42.6	+1.2	69	24	52	10	10	33	38	34	78	2.06	−2.7	7	8.1	nw.	29	n.	7	9	7	15	6.3	5.5	.0	0
Austin	605	10	41	29.50	30.15	.....	48.4	−1.1	75	26	58	19	15	39	34	41	78	5.40	+3.3	10	8.9	n.	30	n.	12	8	6	17	6.7	7.0	.0	2
Brownsville	57	5	54	30.03	30.09	.....	60.0	+.2	80	25	70	32	14	50	40	52	84	.52	−1.3	10	11.1	se.	34	nw.	8	6	8	17	6.9	.0	.0	1
Corpus Christi	20	4	33	30.10	30.12	+.02	55.8	+1.8	73	22	64	30	15	47	35	50	84	2.27	.....	11	11.6	se.	34	nw.	8	7	7	17	6.6	T	.0	1
Dallas	512	5	45	29.60	30.16	.....	45.7	+.3	72	26	56	14	9	36	43	38	80	2.32	−.1	11	9.7	s.	40	w.	26	10	4	17	6.2	T	.0	0
Fort Worth	679	5	56	29.43	30.16	+.04	46.5	+2.1	73	26	56	17	9	37	32	36	74	2.58	+.5	11	11.0	nw.	44	w.	26	9	7	15	6.2	T	.0	0
Galveston	54	106	114	30.07	30.13	.00	53.0	−.8	67	21	58	30	9	48	19	50	92	9.92	+6.5	16	10.9	se.	31	e.	7	11	3	17	6.1	.0	.0	3
Houston	138	157	190	29.99	30.15	.....	53.0	+.3	73	21	61	25	9	45	26	46	84	8.52	+4.8	14	11.0	se.	28	se.	26	8	5	18	6.6	.0	.0	2
Palestine	510	64	72	29.62	30.16	+.04	48.2	.0	71	21	56	18	9	40	26	40	76	5.76	+2.3	15	7.6	s.	26	ne.	12	6	7	18	6.9	3.0	.0	1
Port Arthur	34	39	134	30.11	30.14	.....	52.6	−1.2	70	23	60	28	9	45	24	47	84	9.08	+5.4	13	13.5	n.	45	e.	7	7	8	16	6.4	.0	.0	4
San Antonio	693	6	51	29.39	30.13	+.03	50.3	−2.0	74	26	61	20	9	40	43	42	78	3.49	+2.0	11	8.9	n.	34	ne.	12	7	7	17	6.5	1.1	.0	4

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean max. + min.÷2	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
Ohio Valley and Tennessee	*Ft.*	*Ft.*	*Ft.*	*In.*	*In.*	*In.*	*° F.*	*° F.*	*°F.*		*°F.*	*° F.*		*° F.*	*°F.*	*° F.*	*%*	*In.*	*In.*		*Miles*								*0–10*	*In.*	*In.*	
							36.3	+3.7									79	1.54	−2.4										6.3			
Chattanooga [1]	762	6	66	29.35	30.19	+.03	40.2	+1.1	67	28	51	17	10	29	42	32	81	3.27	−2.0	9	5.6	ne.	33	nw.	31	4	11	16	6.9	1.0	.0	0
Knoxville [1]	995	27	53	29.10	30.20	+.05	40.9	+3.2	69	27	50	21	11	31	35	31	76	2.05	−2.6	9	7.1	ne.	38	nw.	31	5	10	16	6.8	1.8	.0	0
Memphis [4]	399	5	86	29.75	30.19	+.03	42.0	+2.3	68	24	51	10	9	33	30	34	76	2.04	−2.8	10	8.0	e.	21	sw.	22	9	7	15	6.2	3.9	.0	0
Nashville [1]	546	5	72	29.58	30.18	+.02	40.2	+1.6	72	27	49	16	16	31	36	31	76	2.74	−2.0	7	8.0	s.	29	nw.	31	4	11	16	7.0	3.0	.0	0
Lexington	989	6	----	29.09	30.19	+.06	37.0	+4.1	74	27	47	10	9	27	32	----	----	1.95	−2.2	11	----	s.	----	----	----	13	9	9	5.0	2.6	.0	1
Louisville [1]	525	106	120	29.60	30.18	+.04	38.4	+4.0	72	27	45	16	13	32	27	27	72	1.13	−2.9	6	8.2	s.	27	s.	27	14	7	10	5.2	1.2	.0	0
Evansville [1]	431	12	40	29.70	30.19	+.05	36.3	+4.7	68	27	46	10	9	27	36	28	79	.74	−3.0	5	7.2	nw.	24	w.	31	7	12	12	6.3	.6	.0	0
Indianapolis [1]	823	5	54	29.25	30.17	+.05	32.6	+5.3	67	26	42	5	13	23	31	26	80	.21	----	5	9.9	sw.	35	nw.	31	10	6	15	5.6	T	.0	0
Terre Haute [2]	575	68	149	29.55	30.20	----	35.2	+5.4	63	25	43	9	13	28	25	26	81	.42	−2.3	5	8.9	s.	31	nw.	31	9	11	11	5.3	T	.0	0
Cincinnati [2]	627	11	51	29.48	30.19	+.07	36.2	+5.9	70	27	44	12	13	29	26	26	79	.99	−2.5	6	7.3	sw.	24	w.	31	7	9	15	6.5	T	.0	0
Columbus [2]	822	90	110	29.26	30.18	+.07	33.9	+5.3	63	25	41	13	13	27	27	26	80	.50	−2.6	5	8.9	s.	31	sw.	28	8	3	20	7.3	T	.0	0
Vandalia [1]	1,003	6	55	29.06	30.17	----	32.2	+4.5	62	27	40	8	13	25	27	26	82	.62	−2.6	5	10.5	s.	36	w.	5	11	3	17	6.4	T	.0	0
Elkins [2]	1,947	61	78	28.06	30.19	+.07	32.4	+2.0	61	28	42	6	10	22	35	24	84	2.51	−1.3	10	5.3	w.	27	w.	31	4	7	20	7.4	9.7	T	0
Parkersburg	637	77	84	29.47	30.18	+.06	34.5	+2.0	66	28	44	10	9	26	35	26	77	1.29	−2.3	9	5.1	se.	29	nw.	31	9	10	12	6.0	.2	.0	0
Pittsburgh [1]	842	39	54	29.22	30.14	+.03	32.8	+4.6	62	26	40	8	9	26	31	25	77	1.26	−1.8	10	10.2	s.	34	w.	28	5	12	14	6.7	.3	T	0
Lower Lake Region							29.3	+5.4									80	1.19	−1.4									7.3			
Buffalo [1]	768	34	96	29.25	30.12	+.05	29.7	+5.8	55	26	35	4	8	24	25	24	80	1.23	−2.1	13	14.1	sw.	41	sw.	14	4	7	20	7.6	3.4	1.0	0
Canton	448	10	61	29.57	30.08	----	22.4	+5.8	50	27	31	−6	8	14	34	16	78	1.95	− .6	11	8.4	w.	29	w.	14	8	5	18	7.0	7.4	.9	0
Oswego	335	71	85	29.71	30.10	+.03	27.8	+3.9	53	27	34	5	17	21	26	21	72	1.44	−1.5	17	10.5	se.	26	nw.	12	5	4	22	7.6	8.4	1.8	0
Rochester [1]	523	5	69	29.53	30.11	+.04	28.6	+5.4	58	26	36	4	8	22	27	23	82	1.18	−1.7	15	11.4	w.	42	w.	31	2	6	23	8.1	4.0	2.2	0
Syracuse [1]	596	5	57	29.43	30.11	+.04	26.0	+3.2	55	26	35	−6	17	17	37	22	85	1.75	−1.0	15	9.2	sw.	36	w.	31	4	6	21	7.7	16.3	1.8	0
Erie [2]	714	57	81	29.34	30.15	+.07	31.3	+4.5	61	26	36	14	8	26	21	24	82	.85	−1.9	6	8.6	sw.	22	sw.	31	3	9	19	7.6	1.0	T	0
Cleveland [1]	762	27	54	29.30	30.15	+.06	32.0	+7.3	64	24	38	11	18	26	35	26	79	1.30	−1.2	9	10.7	s.	34	sw.	5	6	7	18	7.0	4.8	.0	0
Sandusky	620	5	67	29.44	30.16	+.07	32.8	+6.5	65	26	39	10	13	26	33	----	----	.90	−1.4	9	9.4	sw.	30	nw.	31	7	9	15	6.7	.6	T	0
Toledo [1]	628	5	47	29.44	30.16	+.07	30.6	+6.1	63	26	39	7	9	22	37	24	82	.69	−1.5	6	11.0	sw.	31	sw.	21	6	8	17	6.6	.7	.0	0
Fort Wayne [1]	857	5	33	29.19	30.15	----	30.0	+4.6	61	26	39	3	9	21	32	22	78	.55	−1.8	5	8.2	sw.	28	w.	28	6	9	16	6.7	1.6	.0	0
Detroit [1]	730	5	78	29.32	30.14	+.06	30.8	+6.7	64	26	37	9	9	24	24	24	78	1.20	− .9	3	10.0	sw.	34	nw.	6	2	11	18	7.6	1.9	.3	0
Upper Lake Region							27.2	+9.7									82	1.09	−0.7									6.9			
Alpena	609	5	89	29.38	30.07	+.03	28.4	+9.3	62	26	34	3	8	23	25	24	84	.59	−1.3	8	10.4	nw.	37	nw.	31	1	4	26	8.6	4.6	T	0
Escanaba	612	51	72	29.36	30.06	+.01	25.8	+10.4	47	26	32	0	13	20	27	21	84	.97	− .5	6	10.0	s.	30	nw.	31	5	8	18	7.0	6.2	0	0
Grand Rapids [2]	707	70	244	29.33	30.12	+.06	31.0	+6.5	63	26	37	10	9	25	19	24	86	1.38	−1.0	7	11.0	s.	33	sw.	21	4	8	19	7.3	3.1	T	0
Lansing [2]	878	5	90	29.14	30.13	----	28.2	+5.8	63	26	35	3	9	22	22	23	84	1.32	− .5	4	8.5	sw.	23	w.	28	3	9	19	7.8	2.3	1.1	0
Marquette	734	44	73	29.20	30.03	−.01	27.4	+11.1	57	26	34	8	13	21	27	21	78	1.18	−1.2	13	8.9	nw.	26	sw.	13	5	8	18	7.2	8.3	T	0
Sault Ste. Marie [1]	614	11	52	29.34	30.04	+.01	23.7	+11.6	43	26	30	−3	16	18	24	21	88	1.61	−.4	15	11.1	se.	37	nw.	31	0	8	23	8.8	13.3	3.9	0
Chicago [1]	673	5	36	29.39	30.15	+.05	31.4	+9.1	62	26	40	3	12	22	28	24	79	.89	−1.0	6	9.5	s.	26	w.	28	10	7	14	5.8	3.3	.0	1
Green Bay	617	109	141	29.39	30.09	+.03	26.8	+11.1	56	26	34	0	7	19	24	20	78	.99	−.6	5	10.1	s.	27	s.	18	8	11	12	5.9	3.2	.0	0
Milwaukee [1]	681	33	66	29.35	30.12	+.04	27.6	+8.2	62	26	37	−4	7	19	27	21	77	1.40	−.4	8	11.5	sw.	38	sw.	18	10	6	15	6.1	3.0	.0	1
Duluth [3]	1,133	5	47	28.79	30.06	−.03	21.9	+14.0	43	20	30	−10	7	14	27	16	85	.57	−.4	5	12.6	w.	39	nw.	20	14	10	7	4.6	3.2	1.4	0
North Dakota							22.0	+17.4									76	0.33	−0.2									5.5			
Fargo [1]	940	5	43	29.03	30.09	−.05	21.1	+17.3	53	20	31	−15	7	11	31	14	75	.60	−.1	9	11.8	s.	38	nw.	18	9	9	13	5.7	5.8	5.0	0
Bismarck	1,674	8	57	28.25	30.10	−.03	23.6	+17.3	51	20	35	−8	12	12	38	16	76	.22	−.2	4	8.5	nw.	40	nw.	18	9	10	12	5.5	4.6	1.8	0
Devils Lake	1,478	11	44	28.43	30.09	−.03	18.8	+17.0	48	20	29	−14	6	9	30	14	85	.12	−.4	4	8.5	nw.	35	nw.	20	8	12	11	5.7	1.5	.3	0
Lemmon, S. Dak	2,602	4	30	27.28	30.11	----	25.0	----	53	19	37	−4	12	13	40	15	71	.46	−.1	3	----	nw.	----	----	----	13	3	15	----	10.5	10.0	0
Grand Forks	832	4	41	29.14	30.09	----	17.6	----	49	20	28	−14	7	7	37	13	----	.37	----	4	----	s.	----	----	----	11	13	7	----	6.0	6.0	0
Williston	1,878	41	48	28.02	30.07	−.04	24.3	+17.9	55	23	36	−9	12	13	39	16	74	.26	−.3	4	5.8	sw.	33	nw.	20	11	12	8	5.1	.4	.0	0
Upper Mississippi Valley							30.9	+2.6									79	0.84	−0.8									5.1			
Minneapolis-St. Paul, Minn [1]	919	43	74	29.07	30.11	.00	26.6	+13.9	58	25	35	−6	8	18	31	20	80	.24	−.6	3	10.5	w.	34	ne.	27	15	8	8	4.8	1.0	.0	0
Springfield, Minn	1,025	4	42	28.96	30.10	----	27.4	----	62	25	36	−3	7	19	36	20	74	.66	----	1	----	nw.	----	----	----	14	9	8	----	T	T	0
La Crosse [1]	714	5	29	29.30	30.11	.00	26.0	+11.7	54	25	36	−11	8	17	38	20	84	1.06	.0	5	9.2	s.	28	w.	18	15	6	10	4.8	1.6	.0	0
Madison [2]	974	70	78	29.03	30.13	+.03	27.4	+10.7	56	26	35	−2	7	19	24	20	80	1.68	+.3	4	8.1	nw.	22	sw.	20	11	8	12	5.6	3.1	.0	0
Charles City	1,015	10	51	29.01	30.15	+.01	27.4	+13.7	60	25	38	−9	8	17	38	18	86	1.21	+.2	6	6.4	nw.	23	s.	27	16	4	11	4.8	.5	T	0
Davenport [1]	606	6	50	29.48	30.17	+.05	30.1	+9.9	63	27	41	0	13	19	35	22	80	.60	−.8	4	9.1	w.	31	sw.	27	12	10	9	5.1	T	.0	1
Des Moines [2]	860	5	99	29.18	30.14	.00	31.5	+11.4	61	26	41	−4	8	22	37	22	75	1.37	+.3	5	8.3	sw.	35	sw.	27	14	9	8	4.3	1.6	.0	2
Dubuque	699	81	96	29.36	30.15	+.03	29.7	+10.6	62	27	39	−3	8	20	31	22	74	1.31	.0	5	5.7	s.	18	nw.	5	11	8	12	5.2	3.3	.0	1
Burlington, Iowa [1]	707	6	35	29.39	30.17	+.03	30.6	+6.7	62	27	41	1	8	20	30	22	78	.63	−1.1	4	10.3	s.	34	nw.	5	10	12	9	5.2	T	.0	0
Cairo	357	5	99	29.80	30.20	+.04	39.2	+4.3	66	27	47	14	9	31	31	----	----	.74	−3.0	5	7.9	sw.	24	sw.	22	9	7	15	6.1	1.8	.0	1
Peoria [1]	609	6	26	29.50	30.18	+.06	31.0	+8.9	63	27	40	2	13	21	34	22	76	.57	−1.2	6	9.2	sw.	28	w.	28	14	6	11	4.9	T	.0	0
Springfield, Ill. [2]	636	5	191	29.47	30.18	+.05	33.6	+7.1	65	27	41	11	12	27	20	25	85	.38	−1.7	5	10.9	s.	29	nw.	31	9	11	11	5.7	T	.0	1
St. Louis [3]	568	6	303	29.56	30.20	+.06	37.7	+6.6	70	27	45	16	13	30	24	26	73	.30	−2.0	3	11.2	nw.	31	nw.	5	11	12	8	4.8	.5	.0	0
Missouri Valley							32.3	+2.0									74	0.98	−0.1									5.2			
Columbia, Mo [2]	784	6	66	29.31	30.18	+.05	34.9	+5.7	64	27	44	8	8	26	31	26	76	.47	−1.4	4	6.6	s.	23	sw.	27	12	10	9	4.9	.7	.0	0
Kansas City [1]	963	38	76	29.11	30.17	+.02	36.0	+7.8	65	26	44	4	8	28	29	27	72	.68	−.6	5	9.1	sw.	37	sw.	27	13	8	10	5.3	.8	.0	1
St. Joseph [2]	967	11	49	29.10	30.17	----	34.8	+9.3	63	26	42	4	8	27	25	26	80	.95	−.3	5	7.7	s.	25	sw.	27	16	5	10	4.6	.1	.0	1
Springfield, Mo. [1]	1,324	5	60	28.74	30.18	+0.4	36.4	+4.1	68	26	46	2	9	27	31	28	74	.98	−1.4	5	10.1	se.	34	sw.	27	10	8	13	5.6	5.1	.0	1
Topeka	987	65	87	29.10	30.18	----	36.2	+8.6	67	26	45	1	8	28	29	28	75	.54	−.4	3	7.7	s.	24	sw.	27	14	6	11	4.8	3.2	.0	1
Lincoln [2]	1,189	11	81	28.84	30.16	+.01	33.7	+10.9	68	25	45	−2	8	22	28	20	67	1.02	+.4	5	9.5	s.	37	w.	27	6	12	13	6.3	.2	.0	0
Omaha [1]	1,105	5	68	28.93	30.15	.00	31.6	+10.7	69	25	43	−6	8	20	44	22	72	.75	.0	5	10.8	s.	41	sw.	27	8	15	8	5.3	.1	.0	1
Valentine	2,598	46	54	27.49	30.13	+.01	26.3	+7.4	64	20	39	−10	12	14	45	17	73	1.74	+1.3	4	7.6	w.	29	s.	23	12	9	10	5.4	11.1	9.0	0
Sioux City [1]	1,138	5	40	28.89	30.16	+.01	28.5	+12.2	68	25	41	−9	8	16	48	20	75	.96	+.2	4	10.3	nw.	41	sw.	27	11	9	11	5.5	1.3	.0	0
Huron [1]	1,301	5	41	28.68	30.13	−.03	24.8	+13.5	63	20	38	−11	7	11	44	17	80	1.66	+1.1	5	11.3	nw.	47	e.	27	11	12	8	4.8	4.4	2.5	0
Northern Slope							25.3	+5.0									69	0.70	0.0									6.3			
Billings [1]	3,570	16	40	26.34	30.10	----	30.8	+8.4	61	19	40	0	7	22	32	16	54	.31	----	4	14.4	sw.	40	w.	17	4	14	13	6.7	3.3	.6	0
Havre	2,507	11	67	27.37	30.07	−.03	27.5	+14.6	63	19	40	−5	4	14	45	14	58	.02	−.7	2	9.0	sw.	43	sw.	17	9	10	12	5.6	.2	.0	0
Helena [1]	4,124	5	43	25.84	30.22	+.07	23.4	+4.7	51	20	35	−4	11	12	30	15	70	.03	−.5	2	5.8	w.	56	w.	17	5	8	18	7.1	.6	.0	0
Missoula [2]	3,205	80	91	26.74	30.25	----	24.7	+2.3	46	19	32	0	11	17	24	18	84	.04	−1.0	1	5.1	se.	25	w.	2	11	5	15	5.8	.8	T	0
Kalispell	2,973	48	56	27.02	30.18	+.06	25.8	+5.4	48	20	33	7	8	19	26	20	78	.27	−1.3	6	4.3	w.	21	sw.	17	3	6	22	7.8	2.8	T	0
Miles City [1]	2,371	5	28	27.55	30.12	.00	26.6	----	60	19	39	−5	30	14	38	13	59	.65	----	4	----	w.	----	----	----	6	11	14	6.1	7.1	6.0	0
Rapid City [1]	3,259	5	63	26.65	30.14	+.04	28.1	+8.1	62	23	39	−2	11	17	39	18	72	1.77	+1.3	7	11.7	nw.	50	nw.	27	6	11	14	6.3	22.5	17.4	0
Cheyenne [1]	6,094	5	40	23.98	30.15	+.10	27.4	+1.9	60	20	40	−4	7	14	47	14	58	.42	.0	5	11.3	nw.	41	nw.	17	8	16	7	5.3	6.2	.7	0
Lander	5,352	60	68	24.70	30.30	+.18	11.2	−7.0	46	18	22	−17	11	0	32	6	78	.94	+.4	8	3.0	sw.	17	nw.	18	6	14	11	6.1	12.1	12.2	0
Sheridan [1]	3,790	5	38	26.14	30.16	----	25.1	+5.8	58	19	38	−2	29	13	38	16	72	.94	+.1	7	5.6	s.	36	w.	17	5	12	14	6.5	12.4	4.6	0
North Platte [3]	2,821	11	51	27.12	30.14	+.02	29.2	+6.3	66	20	42	−2	8	16	41	17	72	1.84	+1.4	4	6.7	w.	22	nw.	18	8	14	11	6.1	5.2	3.5	0

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments: Barometer above sea level	Thermometer above ground	Anemometer above ground	Pressure: Station	Sea level	Departure from normal	Temperature of the air: Mean max. + mean min. ÷2	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Greatest daily range	Mean temperature of the dew-point	Mean relative humidity	Precipitation: Total	Departure from normal	Days with 0.01 inch or more	Wind: Average hourly velocity	Prevailing direction	Maximum velocity: Miles per hour	Direction	Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
Middle Slope	*Ft.*	*Ft.*	*Ft.*	*In.*	*In.*	*In.*	°F.	°F.	°F.		°F	°F		°F.	°F.	°F.	%	*In.*	*In.*		*Miles*								*0-10*	*In.*	*In.*	
Denver [1]	5,292	106	113	24.74	30.12	+.07	34.6	+3.6									74	1.39	+0.5										5.1			
Pueblo [1]	4,690	5	36	25.33	30.17	+.12	32.4	+2.6	69	20	43	6	8	21	35	14	56	1.00	+.6	5	6.9	s.	24	w.	17	14	12	5	4.3	13.0	2.5	0
Concordia	1,302	50	58	28.65	30.16	+.02	30.2	+1.5	67	20	47	−6	8	13	53	16	68	.32	.0	3	6.8	w.	34	nw.	18	15	8	8	4.4	8.2	.8	0
Dodge City [1]	2,509	5	58	27.47	30.15	+.04	34.6	+8.2	67	25	44	−8	8	25	33	26	74	2.04	+1.4	4	7.6	sw.	26	w.	27	12	9	10	5.3	3.8	.0	1
Wichita [1]	1,358	6	64	28.09	30.17	+.04	30.6	+1.6	59	25	40	−5	8	21	29	24	81	.96	+.6	4	13.7	nw.	43	w.	26	14	7	10	5.0	3.6	.0	1
Oklahoma City [2]	1,214	10	47	28.84	30.15	+.04	39.4	+3.0	66	25	48	5	9	31	30	32	79	2.30	+1.1	8	8.3	s.	28	se.	26	14	0	17	5.6	9.0	.0	1
Tulsa [1]	674	10	61	29.43	30.17	.....	38.6	+3.3	68	26	48	0	9	29	32	32	80	1.44	−.2	6	9.4	n.	32	ne.	7	11	7	13	5.5	9.0	.0	2
Southern Slope							42.6	+0.4									74	1.63	+1.0										5.0			
Abilene [1]	1,738	10	56	28.29	30.13	+.04	45.8	+1.6	80	25	58	8	14	34	43	36	76	2.11	+1.2	7	9.0	s.	27	w.	26	12	5	14	5.6	5.6	.0	1
Amarillo [1]	3,676	5	42	26.32	30.14	+.08	35.2	+2.1	65	25	46	4	8	24	37	26	80	1.67	+1.2	4	11.0	nw.	44	ne.	7	17	6	8	4.5	6.1	.0	1
Del Rio	960	63	71	29.11	30.12	+.06	50.4	−1.9	78	25	61	24	9	40	35	42	75	1.85	+1.3	9	8.4	nw.	31	nw.	7	10	8	13	5.6	3.7	.0	1
Roswell	3,566	75	85	26.45	30.13	+.09	38.8	+.4	66	20	54	10	8	24	45	26	63	.90	+.4	5	6.5	n.	34	ne.	7	15	6	10	4.5	2.0	.0	0
Southern Plateau							45.6	−0.9									54	0.39	−0.2										4.0			
El Paso [1]	3,778	5	85	26.26	30.10	+.09	40.8	−2.8	67	31	55	14	9	27	40	23	50	.45	.0	2	9.1	n.	34	w.	7	15	11	5	4.0	T	.0	0
Albuquerque [1]	5,314	5	45	24.81	30.17	.....	29.2	−4.9	57	24	41	1	10	18	35	22	74	.46	+.1	6	7.3	n.	42	s.	24	13	9	9	5.1	4.9	.0	0
Phoenix [2]	1,107	39	87	28.92	30.08	+.05	51.8	+.6	79	19	65	31	7	38	39	32	56	.47	−.3	2	4.7	e.	20	e.	17	13	14	4	4.2	.0	.0	0
Tucson [1]	2,555	6	30	27.42	30.05	.....	50.4	+1.3	78	21	64	23	12	36	40	25	44	.36	−.5	3	.....	se.	.....	.....	.....	14	12	5	4.0	.0	.0	0
Yuma	142	9	54	29.94	30.08	+.03	55.6	+1.2	78	21	68	32	10	44	34	31	44	.20	−.2	1	6.1	n.	27	n.	7	19	9	3	3.0	.0	.0	0
Independence	3,957	5	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middle Plateau							25.5	−2.5									79	0.91	0.0										6.3			
Reno [1]	4,527	20	52	25.54	30.17	+.04	32.6	+1.7	60	22	45	22	9	20	44	25	75	.77	−.8	11	5.0	w.	40	se.	23	4	11	16	6.6	6.6	T	0
Tonopah	6,090	9	20	24.10	30.17	.....	29.9	−.7	51	20	37	12	28	23	24	23	80	.14	−.3	6	.....	se.	.....	.....	.....	10	13	8	.....	2.4	.0	0
Winnemucca	4,339	5	56	25.72	30.23	+.07	22.6	−6.0	45	1	35	−8	7	10	36	18	80	1.14	+.1	9	7.9	ne.	27	sw.	2	10	7	14	6.0	10.8	T	0
Modena	5,473	10	46	24.68	30.20	+.10	23.0	−3.7	47	21	35	−15	29	11	39	.....	.....	1.46	+.6	9	6.8	w.	30	sw.	23	9	7	15	6.1	23.1	7.3	2
Salt Lake City [1]	4,227	32	46	25.75	30.31	+.16	19.2	−8.3	41	2	30	−5	10	8	29	18	90	1.67	+.7	8	5.7	s.w.	21	se.	5	5	5	21	7.4	24.7	9.8	0
Grand Junction	4,602	60	68	25.51	30.20	+.14	25.8	+1.8	47	20	36	0	9	15	33	16	68	.27	−.3	6	4.7	nw.	19	s.	3	11	5	15	5.5	3.0	.0	0
Northern Plateau							28.7	−0.5									84	0.55	−1.1										7.0			
Baker [2]	3,471	36	54	26.58	30.28	+.12	24.6	−.3	44	17	35	1	27	14	30	18	86	.32	−1.1	7	5.8	s.	25	sw.	2	9	12	10	5.5	7.7	1.2	0
Boise [1]	2,739	5	49	27.34	30.28	+.09	25.0	−2.9	47	1	34	0	9	16	24	20	82	.41	−1.3	5	8.0	se.	29	se.	1	8	9	14	6.3	3.5	1.0	0
Pocatello [1]	4,478	5	31	25.60	30.34	+.14	16.7	−5.6	40	17	28	−12	7	5	31	14	86	.44	−.9	4	5.7	sw.	28	sw.	17	3	10	18	7.3	5.9	.0	0
Spokane [1]	1,929	27	42	28.09	30.18	+.06	30.2	+2.7	51	19	38	11	9	23	24	26	84	.53	−1.6	10	4.0	ne.	26	sw.	17	6	4	21	7.5	2.4	T	0
Walla Walla	991	57	65	29.11	30.19	+.04	33.8	+1.1	60	17	40	18	11	28	27	.....	.....	1.08	−.9	5	4.7	s.	27	se.	16	3	9	19	7.6	.1	.0	0
Yakima	1,076	58	67	29.00	30.19	.....	29.6	+2.2	52	17	38	8	6	22	23	.....	.....	.50	−.8	5	3.5	nw.	26	w.	2	2	7	22	8.1	4.6	.0	0
North Pacific Coast Region							42.4	+2.2									78	4.64	−1.9										7.6			
North Head	211	5	56	29.80	30.03	−.02	44.5	+2.4	58	19	49	33	4	40	14	37	74	6.24	−2.5	21	17.7	e.	61	s.	16	3	5	23	8.1	.2	.0	0
Seattle [2]	125	90	321	29.93	30.06	+.01	44.2	+3.4	60	19	50	32	6	39	17	35	76	3.53	−1.4	15	9.2	se.	43	s.	4	5	4	22	7.6	T	.0	0
Tacoma	194	172	201	29.86	30.06	+.02	41.6	+2.8	58	19	47	28	4	36	19	.....	.....	3.94	−2.2	16	7.1	s.	32	s.	16	5	8	18	6.8	T	.0	0
Tatoosh Island	86	9	61	29.91	30.00	+.02	44.7	+3.5	56	13	48	36	25	42	11	38	77	10.56	−1.3	20	20.2	e.	50	w.	1	3	7	21	8.0	T	.0	0
Medford [1]	1,329	29	58	28.70	30.14	.....	38.6	+.6	62	16	48	21	19	30	31	32	79	1.70	−.6	8	.....	nw.	.....	.....	.....	3	7	21	7.7	.7	.0	0
Portland, Oreg. [2]	154	68	106	29.94	30.10	+.02	41.2	+1.8	55	16	46	31	4	36	19	33	82	3.75	−2.8	14	6.2	e.	24	s.	1	5	7	19	7.0	.6	.0	0
Roseburg	510	45	76	29.56	30.11	+.01	41.8	+.6	66	16	50	26	28	33	30	36	80	2.79	−2.5	13	3.0	s.	33	sw.	1	2	6	23	8.1	T	.0	0
Middle Pacific Coast Region							48.6	+1.6									73	3.84	−1.7										7.0			
Eureka	60	72	88	30.05	30.11	+.01	49.8	+2.9	66	12	57	34	25	43	27	41	72	2.92	−4.2	13	7.6	se.	37	s.	13	7	3	21	7.3	.0	.0	0
Redding [1]	722	20	34	29.37	30.14	.....	45.7	+.4	74	18	53	29	3	39	34	33	64	5.07	−1.8	11	7.1	nw.	21	n.	25	5	4	22	7.6	7.0	.0	0
Sacramento	66	92	115	30.07	30.13	+.01	47.0	+1.2	63	19	55	32	4	39	28	40	78	3.08	−.6	8	6.7	n.	27	n.	24	7	6	18	6.7	.0	.0	1
San Francisco [2]	155	112	132	29.96	30.11	.00	51.8	+1.9	69	18	57	41	4	47	22	42	79	4.31	−.2	13	6.3	e.	25	sw.	5	7	6	18	6.6	.0	.0	1
South Pacific Coast Region							53.5	+2.1									65	1.05	−1.2										6.1			
Fresno [1]	327	5	35	29.77	30.13	+.03	46.8	+1.3	65	13	58	29	19	36	34	40	78	.95	−.8	9	3.8	se.	24	nw.	24	3	8	20	7.3	.0	.0	0
Los Angeles	338	223	250	29.75	30.09	+.01	57.2	+2.6	86	19	66	41	26	48	28	38	54	.97	−2.1	8	7.1	ne.	21	nw.	24	7	15	9	5.3	.0	.0	0
San Diego [1]	87	20	55	30.01	30.09	+.02	56.4	+2.4	80	19	67	40	9	46	33	43	64	1.22	−.8	9	5.5	n.	26	w.	24	8	9	14	5.8	.0	.0	1
West Indies																																
San Juan, P. R.	82	10	54	29.94	30.05	.....	75.3	+.3	85	9	80	67	7	71	15	69	82	2.78	−1.4	16	10.3	e.	27	e.	14	9	17	5	5.1	.0	.0	0
Panama Canal																																
Balboa Heights	118	6	92	.....	[3]29.86	+.02	79.6	−.3	91	9	88	67	2	71	23	.....	[3]77	.79	−.2	5	8.0	nw.	24	n.	18	9	21	1	4.5	.0	.0	0
Cristobal	27	47	97	.....	[3]29.88	+.02	80.6	−.9	88	15	84	74	19	77	10	72	[3]76	1.23	−2.1	15	14.1	ne.	31	nw.	18	8	18	5	5.4	.0	.0	0
Alaska																																
Anchorage [1]	132	5	22	.....	29.31	.....	14.7	+3.1	44	12	23	−27	28	6	...	13	86	1.29	+.4	13	5.9	ne.	27	s.	19	2	7	22	.....	24.4	24.6	0
Fairbanks [1]	455	4	63	.....	29.95	.....	−5.6	+5.7	37	9	5	−48	29	−16	...	−8	84	.19	−.8	7	4.2	n.	28	n.	9	6	7	18	.....	2.6	9.6	0
Juneau [1]	80	6	21	.....	29.66	.....	34.8	.....	48	10	38	19	30	31	...	30	83	4.55	.....	24	11.8	e.	41	e.	28	1	0	30	.....	14.0	.0	0
Nome	22	25	56	.....	29.48	.....	5.2	+1.8	34	12	12	−33	26	−2	...	.....	81	.61	−.5	9	9.5	ne.	34	ne.	10	6	7	18	.....	4.5	12.2	0
Hawaiian Islands																																
Honolulu	38	86	100	30.04	30.05	.....	73.2	+2.3	81	24	78	65	13	69	13	.....	.....	.30	−3.5	5	.58	ne.	25	ne.	4	12	16	3	4.2	.0	.0	0
Alaska	**Late Reports for December 1943**																															
Anchorage [1]	132	5	22	29.24	29.39	.....	22.4	+9.1	46	5	30	−7	18	15	33	21	84	1.39	+.5	15	6.5	ne.	41	s.	17	1	3	27	8.8	14.4	7.5	0
Bethel	28	7	31	29.42	29.46	.....	2.4	−4.6	34	30	9	−33	17	−4	32	−1	81	1.07	+.3	14	10.3	ne.	.....	.....	.....	6	7	18	7.0	14.8	14.3	0
Ketchikan	75	60	90	29.88	29.90	.....	41.6	+6.3	50	17	46	31	18	38	13	39	88	18.91	+3.0	28	8.5	se.	34	s.	17	0	0	31	9.8	.3	.3	0
Kotzebue	20	5	31	29.64	29.65	.....	1.3	+5.4	23	30	7	−22	23	−5	29	−2	82	.17	−.7	9	.....	e.	.....	.....	.....	9	4	18	6.5	3.6	6.8	0
McGrath	331	5	31	29.13	29.53	.....	−2.4	.....	27	12	6	−44	18	−10	31	−3	87	1.94	+.6	17	.....	nw.	31	nw.	4	3	3	25	8.3	31.3	30.5	0
Northway	1,718	5	32	27.72	.....	.....	−3.7	.....	20	10	4	−30	18	−11	27	−4	94	.36	.....	5	3.4	.....	24	.....	17	1	9	21	7.8	3.3	8.7	0

[1] Data are airport records.
[2] Barometric data (adjusted to old city elevation) and hygrometric data from airport; otherwise city office records.
[3] Observations taken bihourly.
[4] Pressure (adjusted to old city elevation) temperature and hygrometric data from airport; otherwise city office records.
[5] Temperature and precipitation from city office records, other data from airport.

NOTE.—Except as indicated by notes 1, 2, 4, and 5 data in table are city office records.

SEVERE LOCAL STORMS, JANUARY 1944

(Compiled by Mary O. Souder)

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Oklahoma	7-8					Snow	Snowfall which occurred mostly on the 7th and 8th, averaged 6.2 inches for the State. In only 3 of the past 44 years has the January snowfall been heavier. Main highways were blocked and secondary roads remained badly drifted for days. Traffic accidents were numerous.
Texas	13-14				$16,000,000	Glaze	A heavy accumulation of glaze caused tremendous damage to east Texas timberlands surrounding Lufkin and caused much damage to utility poles and wires in east-central portions of the State. Damage due to stripping of timber was estimated at $16,000,000, but no estimate on damage to utilities was obtainable.
Helena, Mont	17					Wind	Maximum velocities reported by the first-order Weather Bureau stations were from 40 to 56 miles per hour. Only minor damage to power and telephone lines, fences, signboards, and buildings. Reports from the area around Havre indicate that there was some damage to exposed winter wheat, amount not estimated.
Nebraska, extreme western and central portions.	26-27				100,000	Snow, wind, rain, and ice.	Greatest damage to telephone and other wires in central portion of the State. In the western part, considerable delay was experienced by motorists where roads were closed by drifts.
Oklahoma, central and western portions.	26-27	P. M.		2	155,000	Tornadoes and windstorms.	27 persons injured; property damaged.
South Dakota	26-28			1		Heavy rain, snow, and high wind.	Rain and snow, accompanied by near freezing temperature and high wind, blocked traffic, closed some schools, delayed railroad and bus service, and damaged telephone and power lines. A man died of exhaustion due to bad drifts at the Army Air Base in Rapid City.

SOLAR RADIATION AND SUNSPOT DATA FOR JANUARY 1944

[Solar Radiation Investigations Section, I. F. HAND, in charge]

SOLAR RADIATION OBSERVATIONS

MEASUREMENTS of solar radiant energy received at the surface of the earth are made at 10 stations maintained by the Weather Bureau and at 17 stations maintained by other institutions. The intensity of the total radiation from sun and sky on a horizontal surface is continuously recorded (from sunrise to sunset) at all these stations by means of self-registering instruments; pyrheliometric measurements of the intensity of direct solar radiation at normal incidence are made at frequent intervals on clear days at three Weather Bureau stations (Madison, Wis., Lincoln, Nebr., and Albuquerque, N. Mex.), and at the Blue Hill Observatory of Harvard University.

Table 1 contains the measurements of the intensity of direct solar radiation at normal incidence, with means and their departures from normal (means based on less than 3 values are in parenthesis). At Lincoln, Madison, Albuquerque, and Blue Hill the observations are obtained with a recording thermopile, checked by observations with a Smithsonian silver-disk pyrheliometer at Blue Hill. The table also gives vapor pressures at 7:30 a. m. and at 1:30 p. m. (75th meridian, E. S. T.).

Early in December 1943, an Eppley ten-junction pyrheliometer and a Leeds and Northrup micromax potentiometer were installed on top of one of the greenhouses of the Department of Horticulture, University of Missouri, Columbia, Mo. The equipment will be under the immediate supervision of Prof. A. E. Murneek, who intends to study the relationship between solar radiation values and the growth of tomato plants treated with hormones. All apparatus has been standardized and placed on the Smithsonian Scale of Pyrheliometry.

Prof. George O. G. Löf of the University of Colorado has installed radiation equipment to measure total solar and sky radiation at Boulder, Colo., in order to correlate insolation with house heating by solar energy. This station has the greatest elevation of any of those whose data appear regularly in the MONTHLY WEATHER REVIEW.

Solar radiation equipment has been installed also at the University of Los Angeles, under the direction of Prof. Charles P. Hedges.

In order to study the effect of atmospheric contamination, an Eppley ten-junction pyrheliometer and a Leeds and Northrup micromax potentiometer were recently installed at the city office of the Weather Bureau in Boston. This new site is 10 miles north of Blue Hill Observatory. Preliminary data show markedly the effect of city smoke in Boston. On January 18, a day without condensed water vapor clouds but with a heavy smoke pall over the city, the radiation on top of the 19-story Federal Building was less than one-tenth of that at Blue Hill for the hour ending at 9:00 a. m., solar time. The total radiation for the entire day was one-quarter less than that received at Blue Hill during the same period; the percentage loss of the ultraviolet is many times that of the visible or other components. This accounts to a large extent for the much greater percentage of cases of rickets in large industrial cities as compared with smaller towns or open country.

The coordinates of the four new stations are given in table 3.

Table 2 contains the daily amounts of radiation received on a horizontal surface from both sun and sky for all stations except Fairbanks, Alaska; and also the weekly means, their departures from normal and the accumulated departures since the beginning of the year. The values at most of the stations are obtained from the Eppley pyrheliometer, recording either on a microammeter or a potentiometer. If the daily values for total solar and sky radiation at Fairbanks should be desired, they may be obtained approximately 2 months after the date of the observation by writing to the Solar Radiation Investigations Supervisory Station, Blue Hill Observatory, Milton, Mass.

Table 3 gives information about the solar radiation stations which are maintained by, or cooperate with, the Weather Bureau.

TABLE 1.—*Solar radiation intensities during January 1944*

[Gram-calories per minute per square centimeter of normal surface]

Madison, Wis.

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M.					P. M.				Local mean solar time
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.
	mb.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
Jan. 7	0.70	.....	0.80	0.95	.....	.....	.....	1.14	.....	.....	1.73
8	.69	1.01	1.11	1.21	.....	1.54	.....	1.11	.....	.....	1.66
11	1.83	.88	.99	1.11	.....	1.30	.....	1.06	.....	.....	1.93
12	1.08	.75	.90	1.07	.....	1.29	.....	1.11	.....	.....	1.29
13	1.22	.88	1.04	1.14	.....	1.46	.....	1.13	.....	.....	1.93
14	2.74	.70	.84	1.04	.....	1.40	.....	1.02	.....	.....	3.83
15	2.03	.66	.83	.86	.....	.....	.....	.....	.....	.....	4.40
17	3.83	.39	.55	.75	.....	1.25	.....	.74	.....	.....	4.84
20	2.88	.....	.....	.....	.....	.....	.....	1.10	.....	.....	3.72
21	4.84	.....	.....	.....	.....	.....	.....	1.19	.....	.....	4.64
29	4.20	.95	1.07	1.22	.....	1.57	.....	1.01	.....	.....	5.82
Means	.....	.78	.90	1.04	.....	1.40	.....	1.06	.....	.....	.....
Departures	.....	−.14	−.13	−.15	.....	−.16	.....	−.08	.....	.....	.....

Albuquerque, N. Mex.

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M.					P. M.				Local mean solar time
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.
	mb.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
Jan. 1	2.13	0.96	1.07	.....	.....	.....	.....	.....	.....	.....	3.65
3	3.32	.97	1.06	1.15	.....	.....	.....	.....	.....	.....	4.40
5	1.43	1.05	1.16	1.25	.....	.....	.....	.....	1.17	0.97	3.01
13	1.93	.....	1.08	1.21	1.35	.....	1.39	1.19	.90	.....	2.75
16	2.61	1.05	1.13	1.21	.....	.....	1.33	1.12	.....	.....	5.56
19	3.01	.....	1.10	1.21	1.33	.....	.....	.....	.....	.....	4.20
20	3.01	1.04	1.08	1.15	1.21	.....	1.11	1.02	.88	.....	4.60
21	3.32	.....	.....	.....	.....	.....	.....	1.05	.....	.....	5.32
27	3.65	.....	.....	.....	1.38	.....	1.35	1.19	.....	.....	5.83
28	4.20	.....	.....	1.26	.....	.....	.....	.....	.....	.....	5.56
30	4.40	.94	.....	1.15	1.32	.....	1.35	.....	.....	.....	5.83
Means	.....	1.00	1.10	1.20	1.32	.....	1.31	1.12	.92	.....	.....
Departures	.....	−.05	−.05	−.07	−.09	.....	−.17	−.09	−.17	.....	.....

*Extrapolated.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct + diffuse) received on a horizontal surface*

[Gram-calories per square centimeter]

Date	Washington, D. C.	Madison, Wis.	Lincoln, Nebr.	East Lansing, Mich.	New York, N. Y.	Fresno, Calif.	Boston, Mass.	Nashville, Tenn.	Twin Falls, Idaho	La Jolla, Calif.	New Orleans, La.	Riverside, Calif.	Blue Hill, Mass.	Put-in-Bay, Ohio	Ithaca, N. Y.	Newport, R. I.	State College, Pa.	Los Angeles, Calif.	Davis, Calif.	East Wareham, Mass.
1944	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
Jan. 1	189	129	159	39	171	180	.....	179	73	281	.....	261	205	29	100	172	43	264	52	191
2	118	97	180	100	121	173	.....	13	80	160	.....	84	206	85	99	209	99	64	70	190
3	21	170	41	83	17	173	.....	9	150	246	.....	192	89	44	43	56	14	260	84	72
4	114	95	24	46	63	170	.....	49	231	205	324	242	24	47	109	12	236	256	83	15
5	38	91	259	24	106	114	.....	14	91	277	194	252	62	11	50	206	31	221	106	95
6	172	118	102	143	86	132	.....	231	192	280	373	286	19	205	33	30	119	314	250	38
7	192	215	148	63	214	223	.....	81	255	292	19	291	211	127	174	229	152	291	238	234
Mean	120	131	130	71	111	166	.....	82	153	249	227	230	117	78	87	131	99	238	126	121
Departure	−45	+2	−38	−15	−6	+19	.....	−26	+4	+3	+51	−16	−24	−12	−12	−15	−12	.....	−39	−39
Jan. 8	110	270	249	135	160	268	.....	36	163	236	75	241	211	128	113	199	108	279	209	216
9	272	148	256	72	226	251	.....	177	231	300	299	262	247	138	140	238	248	292	73	256
10	174	184	261	131	185	169	.....	275	137	128	394	141	234	125	140	209	191	140	150	223
11	211	227	260	84	133	152	.....	227	226	288	224	300	193	150	141	197	158	275	257	212
12	201	240	281	75	190	266	.....	168	239	308	36	299	169	139	175	188	196	304	227	179
13	210	227	293	116	232	251	.....	180	176	294	25	304	251	239	124	236	250	312	87	200
14	267	211	268	169	151	224	.....	100	116	314	40	302	94	222	131	86	217	314	228	70
Mean	206	215	267	112	182	226	.....	166	184	267	156	264	200	163	138	193	195	274	176	202
Departure	+51	+79	+84	+1	+57	+66	.....	+12	+29	+3	−57	+15	+36	+41	+27	+20	+54	.....	−22	+28
Jan. 15	19	177	247	176	46	142	35	24	160	306	.....	298	140	123	116	109	76	202	234	128
16	244	80	217	180	221	246	52	167	235	318	.....	302	247	213	240	228	279	343	206	230
17	198	202	274	183	137	237	34	230	221	243	394	237	218	214	157	179	138	246	274	247
18	200	120	218	80	76	273	148	190	215	220	361	238	194	137	125	115	114	300	284	191
19	66	72	257	90	123	283	82	251	262	195	338	296	103	89	71	108	48	313	284	85
20	119	153	254	43	108	265	124	107	231	196	458	178	161	98	36	46	126	206	230	48
21	162	231	249	90	120	210	159	282	241	231	416	256	190	174	105	66	221	274	231	88
Mean	144	148	245	120	119	236	91	179	224	244	393	256	179	150	121	122	143	282	249	145
Departure	−14	−4	+55	−11	−3	+53	.....	−5	+49	−20	+142	−25	+19	+10	+5	−46	+4	.....	+38	−6
Jan. 22	227	141	299	54	121	253	220	249	108	172	294	158	234	134	219	230	137	269	235	217
23	142	242	125	140	99	183	24	253	88	111	419	89	29	172	26	41	79	56	116	31
24	238	63	117	114	238	105	242	210	64	240	248	158	256	142	232	266	224	234	309	264
25	238	101	192	41	97	272	135	114	148	314	76	226	205	192	44	199	164	295	317	166
26	242	68	62	155	37	186	14	118	253	.....	184	177	41	207	95	55	204	203	158	68
27	212	17	233	13	184	253	119	181	138	286	233	214	158	68	10	151	82	212	281	144
28	161	94	315	94	12	238	144	306	263	326	126	265	197	267	52	175	236	344	134	204
Mean	211	104	192	87	108	213	128	204	169	241	226	184	160	169	97	160	161	230	221	156
Departure	+36	−76	−29	−51	−47	+10	.....	+19	−11	−28	+5	−57	−16	+28	−39	−12	+39	.....	+29	+18
ACCUMULATED DEPARTURES ON JANUARY 28, 1944																				
	+196	+7	+504	−532	+7	+1636	.....	0	+497	−294	+987	−581	+105	+469	−133	−371	+595	.....	+42	+7

TABLE 3.—*Pyrheliometric Stations*

Station	Under direction of—	North latitude	West longitude	Altitude	Instruments		Remarks
					Receiver	Recorder	
		° ′	° ′				
New Orleans, La.	Tulane University	29 56	90 07	100	Eppley	L&N potentiometer	Good exposure; considerable cloudiness.
La Jolla, Calif.	Scripps Institute of Oceanography.	32 52	117 15	90	do	Engelhard	Splendid exposure a few yards inland from Pacific Ocean. Early morning fogs prevail during part of year.
Riverside, Calif.	University of California	33 58	117 28	1,051	do	do	Excellent exposure in midst of citrus fruit region.
Los Angeles, Calif.	U. C. L. A., Physics—Meteorology.	34 04	118 26	535	do	G. E. potentiometer	(See text.)
Albuquerque, N. Mex.[2][3]	U. S. Weather Bureau	35 05	106 30	5,314	do	L&N potentiometer	At airport; dust at times. Second highest elevation of this group.
Nashville, Tenn.	do	36 07	86 41	600	do	do	At airport with good exposure, but records vitiated by soft-coal smoke in winter.
Fresno, Calif.	do	36 43	119 49	297	do	Engelhard	Good exposure at airport northern edge of city. The San Joaquin Valley has an exceedingly high percentage of sunshine.
Davis, Calif.	University of California	38 32	121 45	106	do	L&N potentiometer	Excellent exposure; little atmospheric contamination.
Washington, D. C.	U. S. Weather Bureau	38 56	77 05	397	do	do	Good exposure on second highest point in District of Columbia. 5½ miles northwest of United States Capitol. Some vitiation from city smoke.
Columbia, Mo.	University of Missouri	38 56	92 19	750	do	do	Free horizon; considerable soft-coal smoke.
Columbus, Ohio	Ohio State University	39 58	83 00	810	do	do	Considerable smokiness with light winds.
Boulder, Colo.	University of Colorado	40 00	105 16	5,428	do	Brown pyrometer	Normally clear air, low humidity, no dust or smoke.
New York, N. Y.	U. S. Weather Bureau	40 47	73 58	156	do	Engelhard	Fair exposure at Central Park Meteorological Observatory. Values vitiated by large city atmospheric contamination.
State College, Pa.	State College, Pa.	40 48	77 52	1,200	do	L&N potentiometer	Splendid exposure in farming country.
Lincoln, Nebr.[3]	U. S. Weather Bureau	40 49	96 42	1,250	do	do	Results very representative of the Great Plains area. Some dust.
Newport, R. I.[4]	Eppley Laboratory	41 30	71 19	52	do	do	Excellent location.
Put-in-Bay, Ohio	Franz Theodore Stone Biological Laboratory.	41 39	82 50	580	do	do	Almost no smoke or dust contamination. On an island 22 miles from the mainland.
East Wareham, Mass.	U. S. Bureau of Plant Industry in cooperation with Massachusetts Experiment Station.	41 46	70 40	50	do	Engelhard	Low ground; close to cranberry bogs and open water.
Chicago, Ill.[1]	U. S. Weather Bureau	41 47	87 25	688	do	do	Good exposure on roof of Rosenwald Hall, University of Chicago. A great deal of smoke.
Blue Hill, Mass.[4]	Harvard University	42 13	71 07	672	do	L&N potentiometer	Excellent exposure on high ridge 10 miles south of Boston. With northerly component winds, some smoke contamination from Boston.
Boston, Mass.	U. S. Weather Bureau	42 21	71 04	360	do	do	Serious smoke contamination. Free horizon.
Ithaca, N. Y.	Cornell University	42 27	76 29	836	do	do	Splendid site; data used by School of Agriculture.
Twin Falls, Idaho	U. S. Bureau of Entomology and Plant Quarantine.	42 27	114 34	3,730	do	Engelhard	Good exposure on high plateau in rich farming country.
East Lansing, Mich.	U. S. Soil Conservation Service in cooperation with Michigan Agricultural Experiment Station.	42 42	84 28	899	do	L&N potentiometer	Very little atmospheric contamination on low ridge dividing two watersheds.
Madison, Wis.[5]	U. S. Weather Bureau	43 05	89 23	974	do	do	Excellent exposure, North Hall, University of Wisconsin. Rapid growth of city has added to atmospheric vitiation recently.
Friday Harbor, Wash.[5]	University of Washington	48 32	123 01	15	do	Engelhard	Good exposure 50 miles northwest of Seattle directly on ocean; considerable fog interference.
Fairbanks, Alaska	University of Alaska	64 51	147 49	555	do	L&N potentiometer	Most northerly station of this kind in the world. Very little contamination.

[1] Temporarily abandoned.
[2] It is hoped that work will be resumed after the war.
[3] Measurements of total solar and sky radiation have been discontinued at Albuquerque until such time as a replacement potentiometer may be obtained. Normal incidence readings are made at this station by means of an Eppley normal-incidence pyrheliometer recording on a Bristol potentiometer.
[4] Besides the standard Eppley pyrheliometer and Leeds and Northrup potentiometer, the laboratory has precision equipment for the standardization of pyrheliometers.
[5] Station also equipped with normal-incidence pyrheliometers recording on Leeds and Northrup potentiometers. At Blue Hill several other types of solar observations also are made.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JANUARY 1944

[Communicated by Capt. J. F. Hellweg, U. S. N. (Ret.), Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count, are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups and total spot count.]

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1944	h m		°	°	°	°				
Jan. 1	10 31			No spots					G	U. S. Naval.
2	12 56			No spots					P	Do.
3	11 16			No spots					G	Mt. Wilson.
4	10 57			No spots					F	U. S. Naval.
5	10 56			No spots					F	Mt. Wilson.
6	11 21			No spots					G	U. S. Naval.
7	10 16			No spots					F	Do.
8	11 23			No spots					P	Do.
9	11 26			No spots					F	Do.
10	10 25			No spots					VG	Do.
11	10 52			No spots					F	Do.
12	11 27			No spots					F	Do.
13	11 22			No spots					F	Do.
14	10 49			No spots					G	Mt. Wilson.
15	10 58			No spots					F	Do.
16	11 11			No spots					F	Do.
17	10 57			No spots					G	U. S. Naval.
18	10 49	7633	+23	127	−22	28	16	3	G	Mt. Wilson.
				(104)	(−5)		16	3		
19	11 47			No spots					F	Do.
20	12 41			No spots					F	U. S. Naval.
21	11 5			No spots					G	Mt. Wilson.
22	10 59	7634	−79	332	+11	79	145	1	F	U. S. Naval.
				(51)	(−5)		145	1		
23	12 27	7634	−64	333	+11	66	145	1	G	Do.
				(37)	(−5)		145	1		
24	10 23	7634	−51	334	+11	53	121	1	G	Do.
				(25)	(−5)		121	1		
25	11 18	7634	−38	333	+11	41	97	1	F	Do.
				(11)	(−5)		97	1		
26	10 37	7634	−25	333	+10	30	73	1	F	Do.
				(358)	(−6)		73	1		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JANUARY 1944—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1944	h m		°	°	°	°				
Jan. 27	10 49	7634	−11	334	+10	19	97	9	G	U. S. Naval
				(345)	(−6)		97	9		
28	10 36	7634	+3	335	+10	16	73	2	F	Do.
				(332)	(−6)		73	2		
29	11 22	7634	+16	334	+10	22	48	4	G	Do.
				(318)	(−6)		48	4		
30	10 34	7634	+29	335	+10	33	36	1	F	Do.
				(306)	(−6)		36	1		
31	10 18	7634	+42	335	+10	46	16	1	F	Do.
				(293)	(−6)		16	1		

Mean daily area for 31 days=28

VG=very good; G=good; F=fair; P=Poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR DECEMBER 1943

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland]

December 1943	Relative numbers	December 1943	Relative numbers	December 1943	Relative numbers
1	22	11	*14	21	27
2	*22	12	*a12	22	22
3	a18	13	*d11	23	22
4	*18	14	*28	24	*18
5	*d14	15	*32	25	12
6	*22	16	*32	26	*0
7		17		27	0
8	*14	18	*b49	28	0
9	19	19		29	*0
10	*24	20	41	30	*0
				31	0

Mean, 28 days=17.6

*Observed at Locarno.

a=Passage of an average-sized group through the central meridian.

b=Passage of a large group through the central meridian.

c=New formation of a group developing into a middle-sized or large center of activity: E, on the eastern part of the sun's disk; W, on the western part; M, in the central-circle zone.

d=Entrance of a large or average-sized center of activity on the east limb.

U. S. GOVERNMENT PRINTING OFFICE: 1944

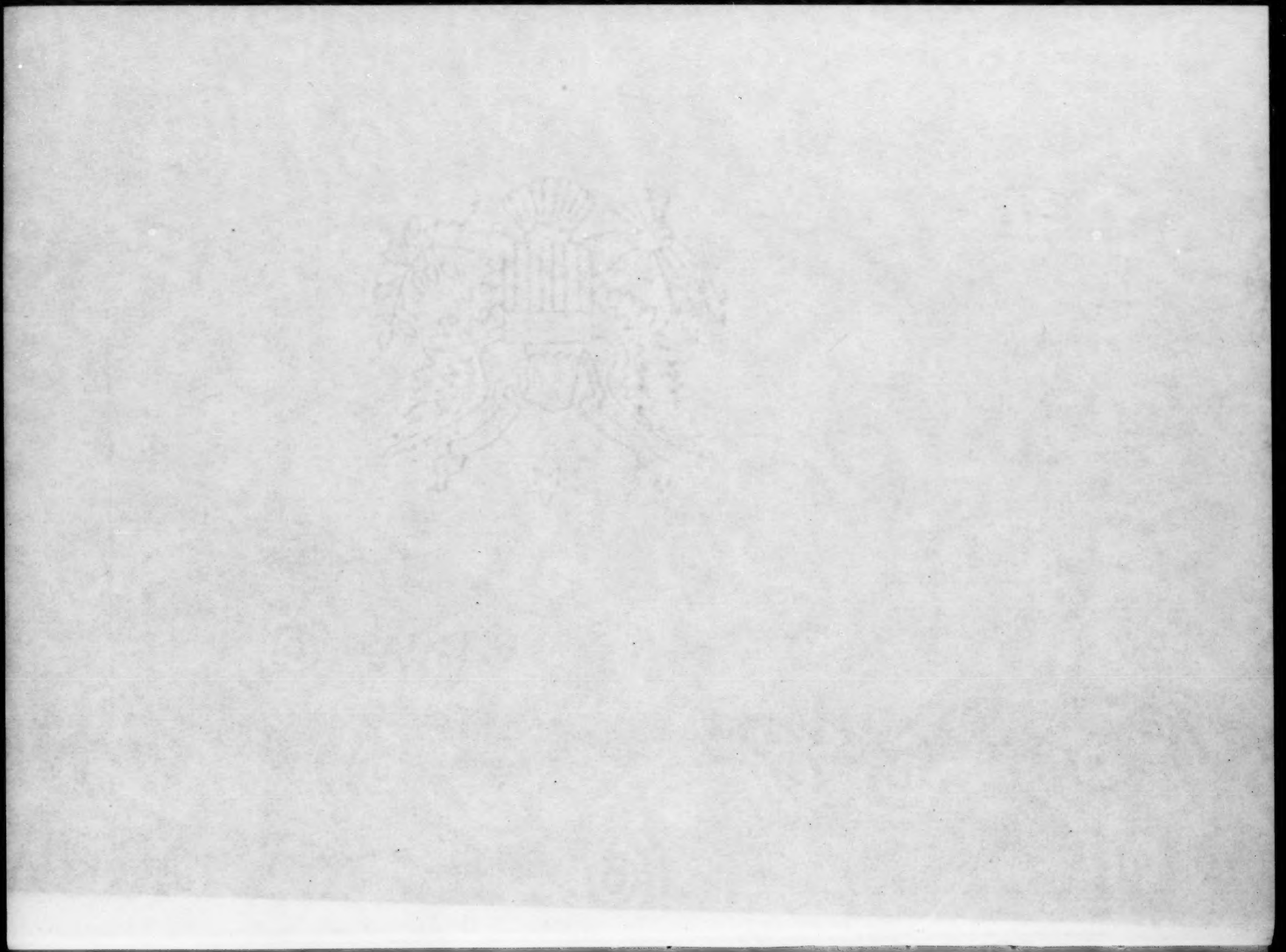


Chart I.—Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, January 1944

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, January 1944

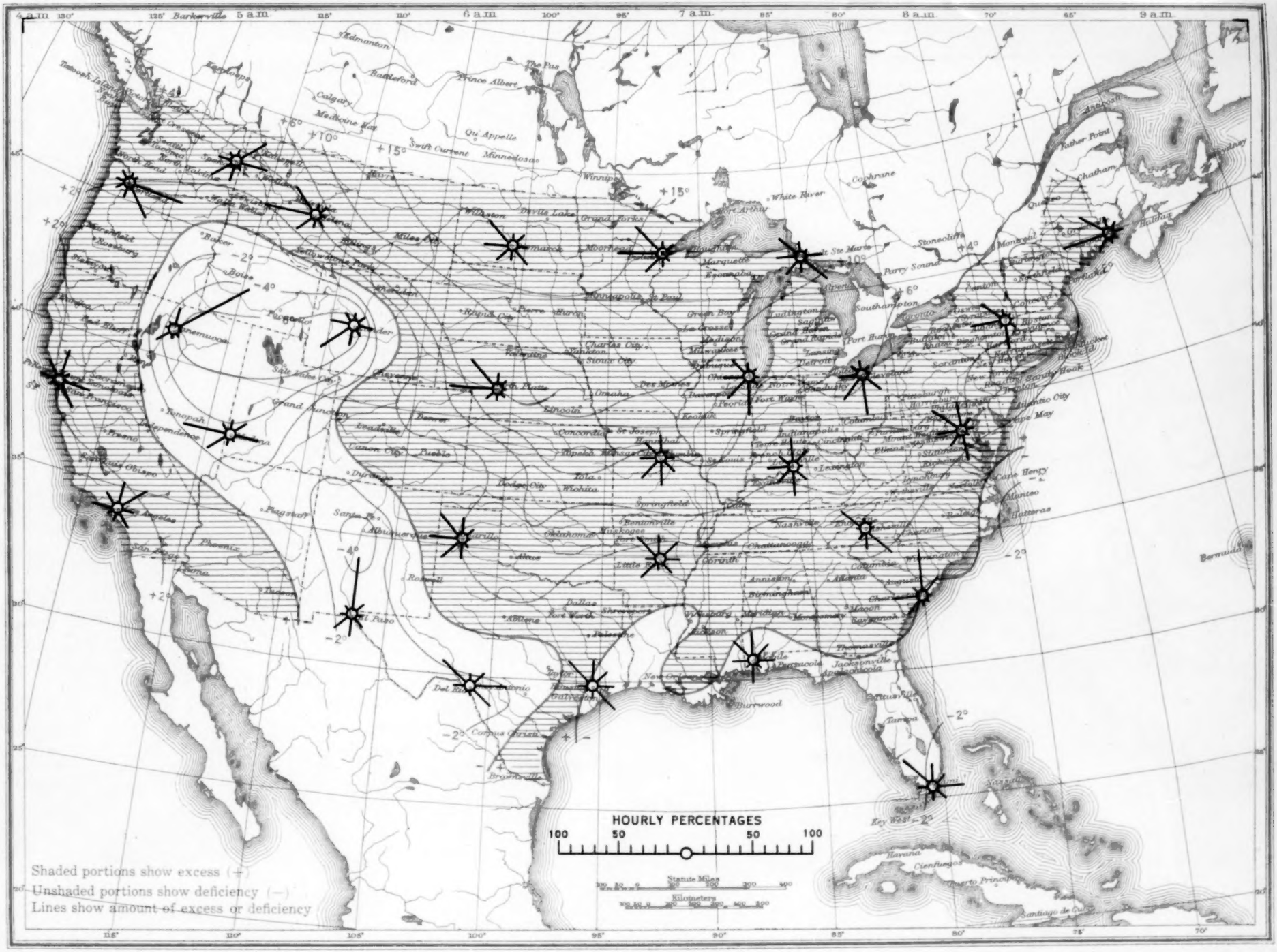
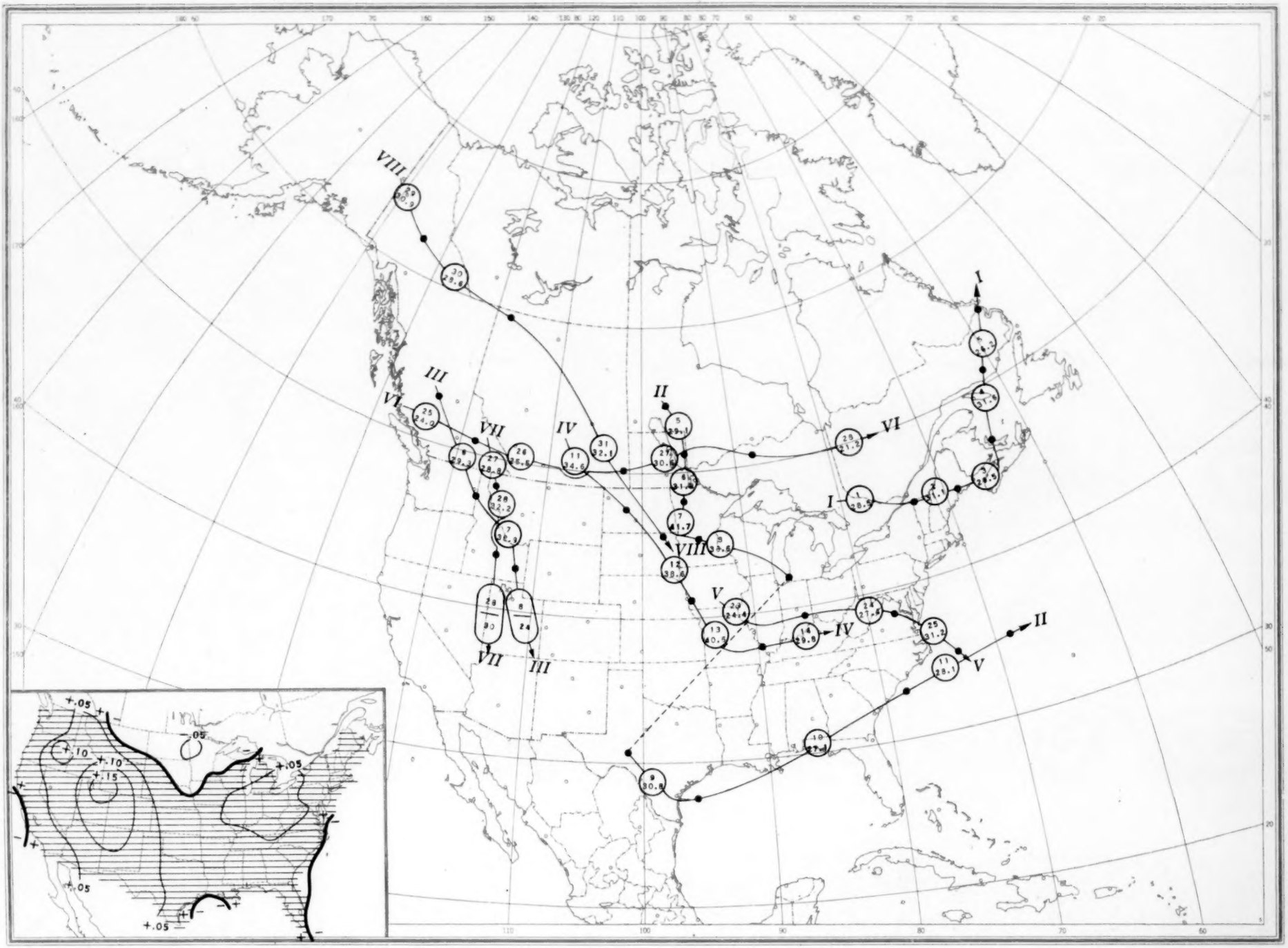


Chart II. Tracks of Centers of Anticyclones, January 1944. (Inset) Departure of Monthly Mean Pressure from Normal

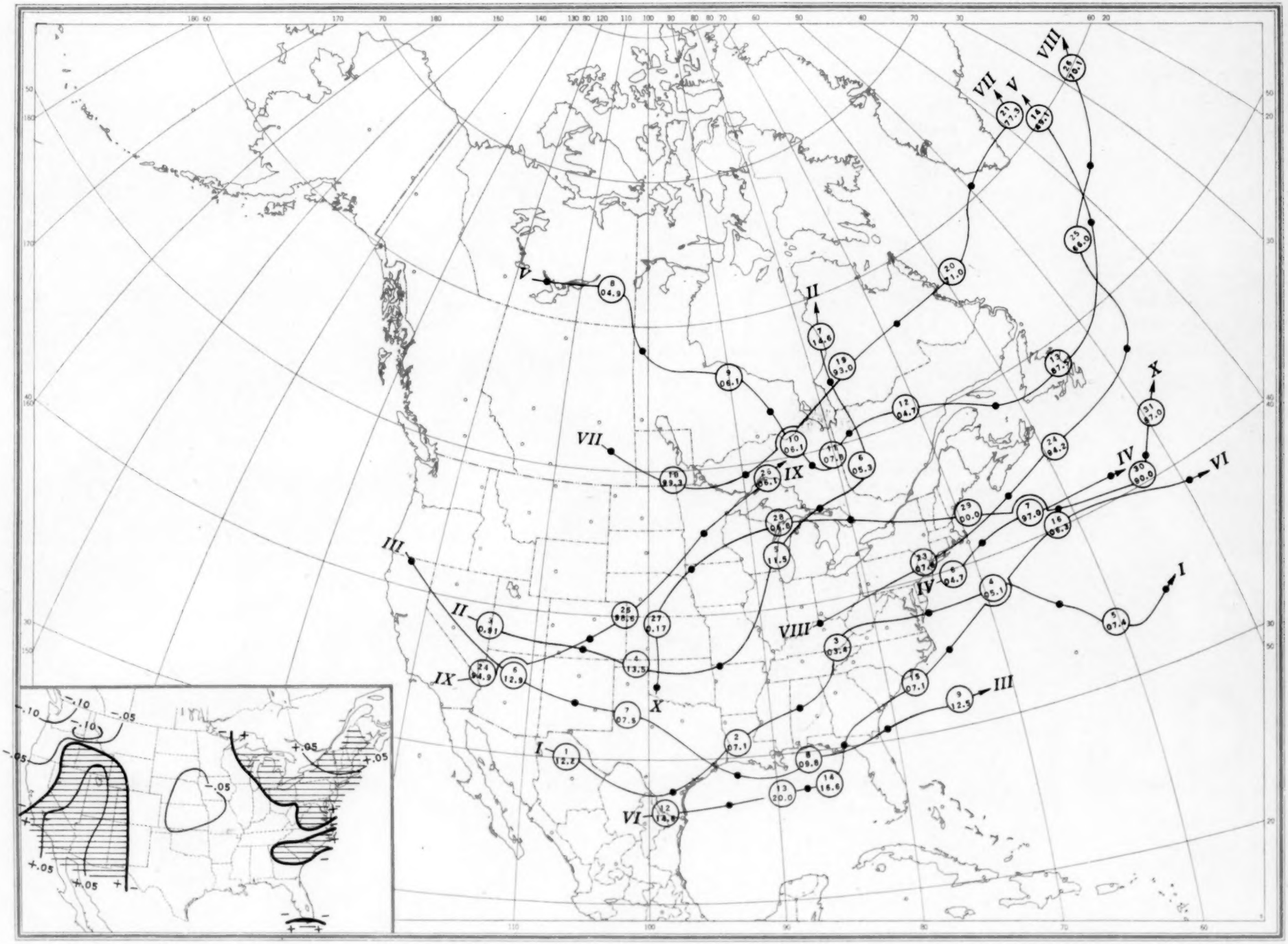


Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, January 1944. (Inset) Change in Mean Pressure from Preceding Month

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, January 1944. (Inset) Change in Mean Pressure from Preceding Month



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time).

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, January 1944

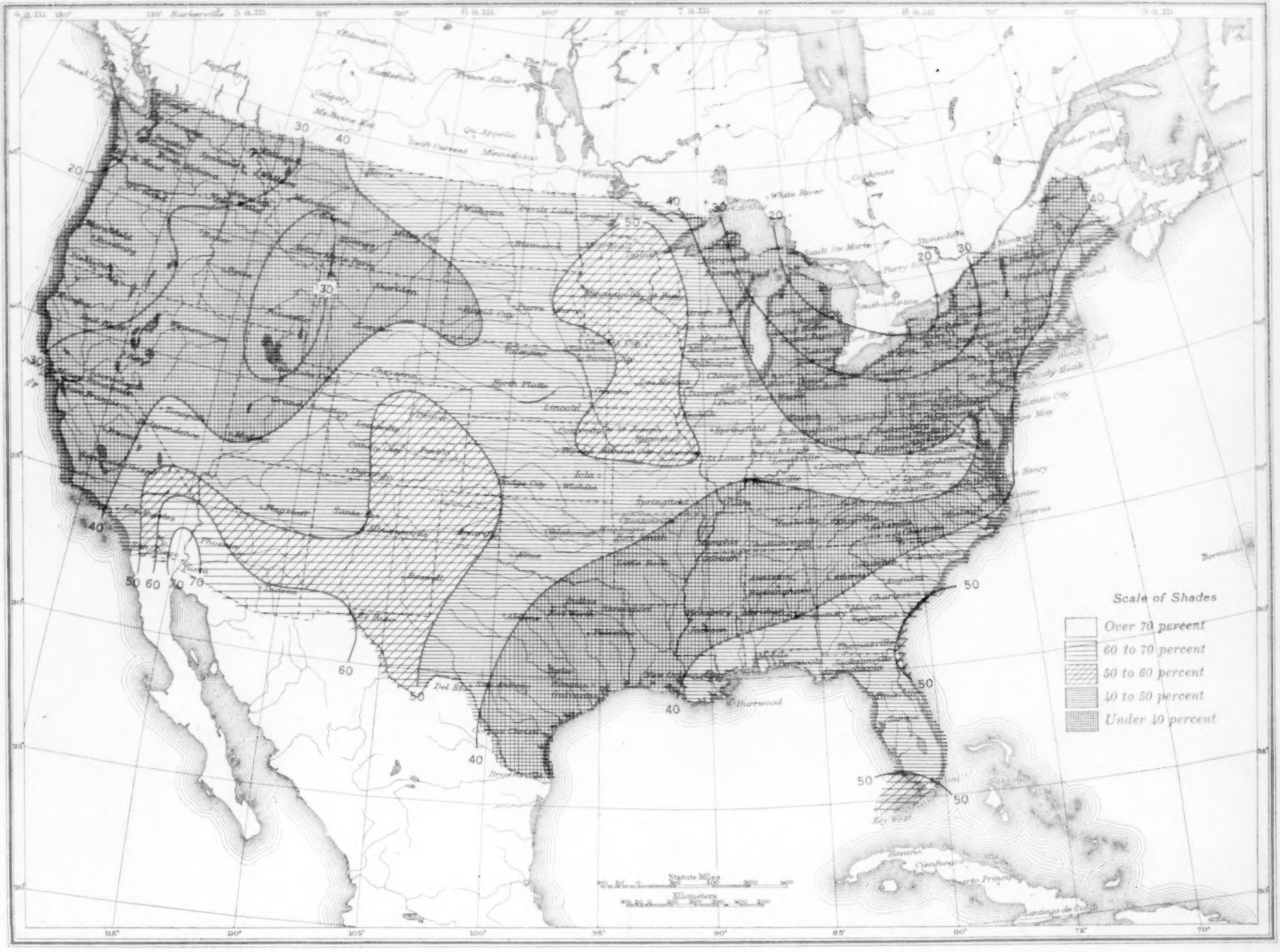


Chart V. Total Precipitation, Inches, January 1944. (Inset) Departure of Precipitation from Normal

Chart V. Total Precipitation, Inches, January 1944. (Inset) Departure of Precipitation from Normal

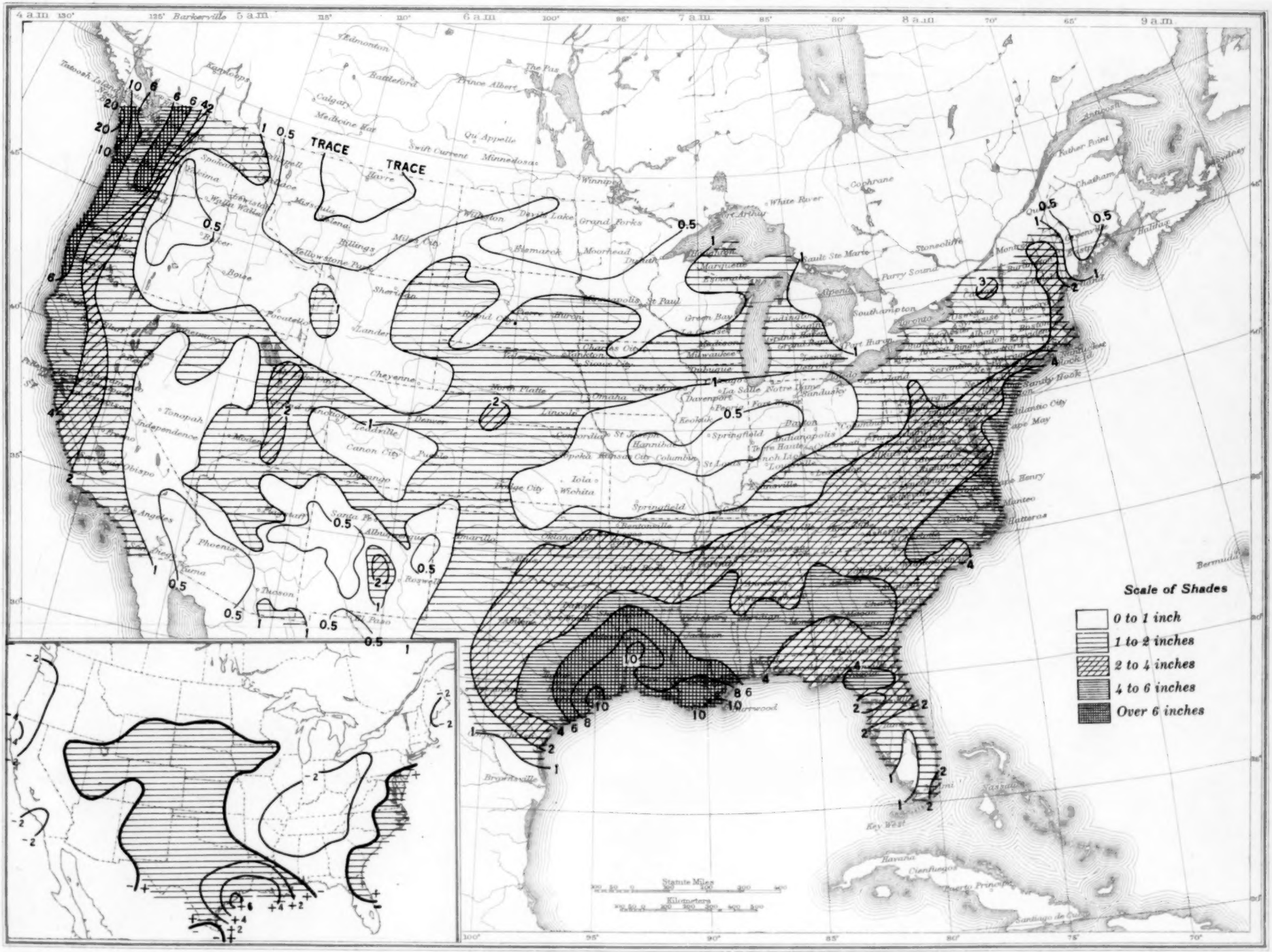


Chart VI. Isobars at Sea Level and Isotherms at Surface; Prevailing Winds, January 1944

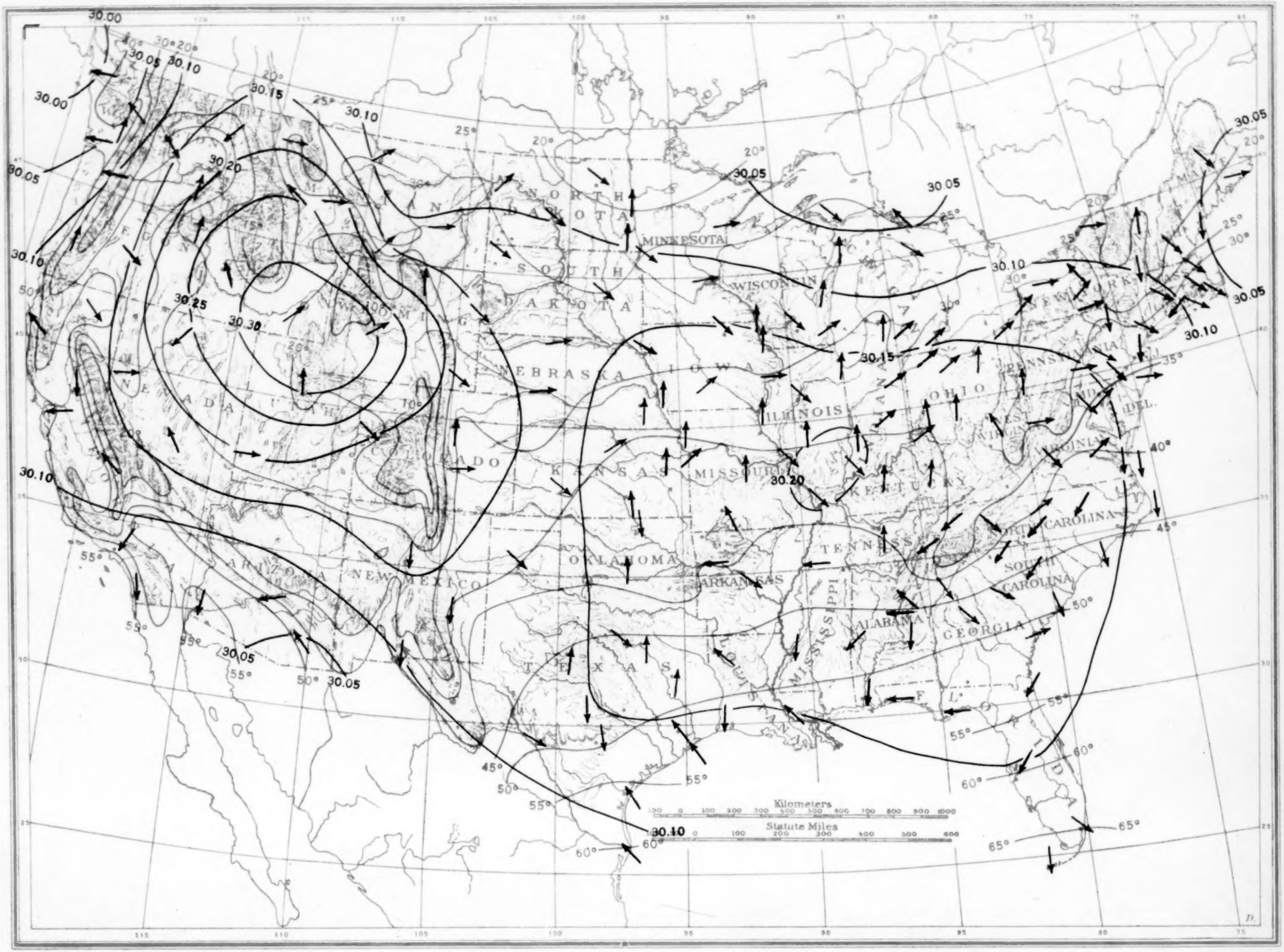


Chart VII. Total Snowfall, Inches, January 1944. (Inset) Depth of Snow on the Ground at 7:30 p. m., Monday, January 30, 1944

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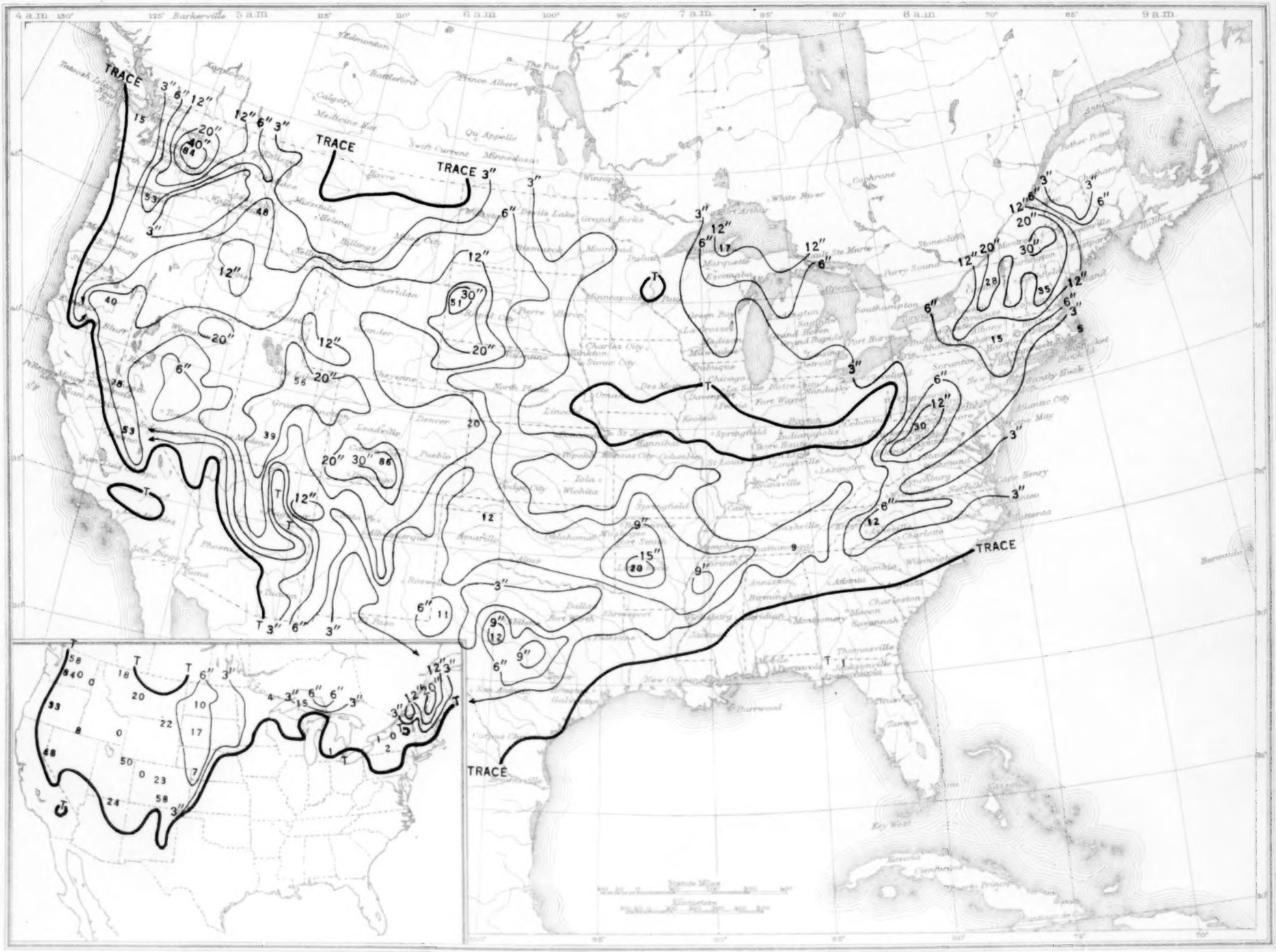


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) January 1944

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) January 1944

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

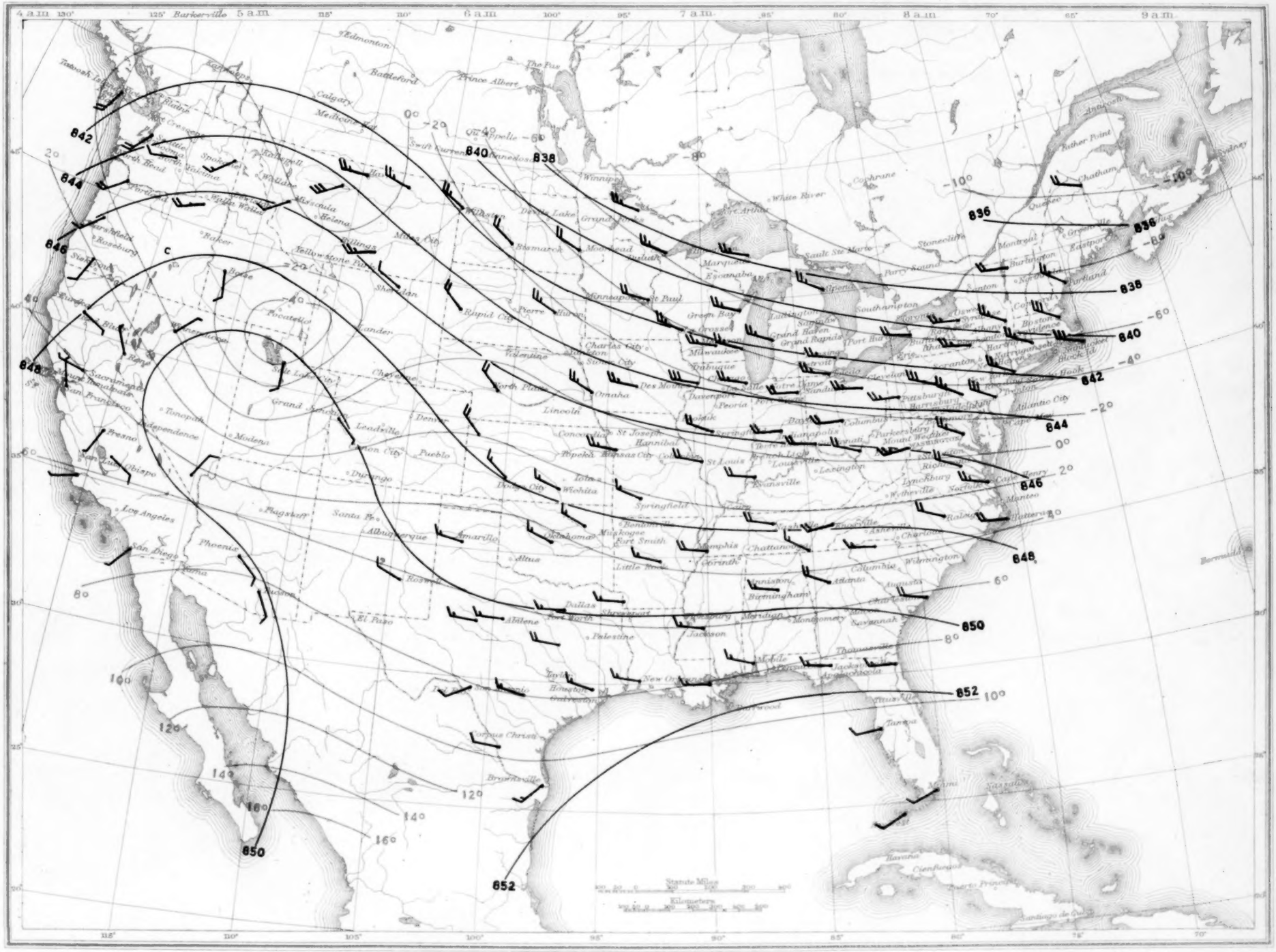


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) January 1944

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

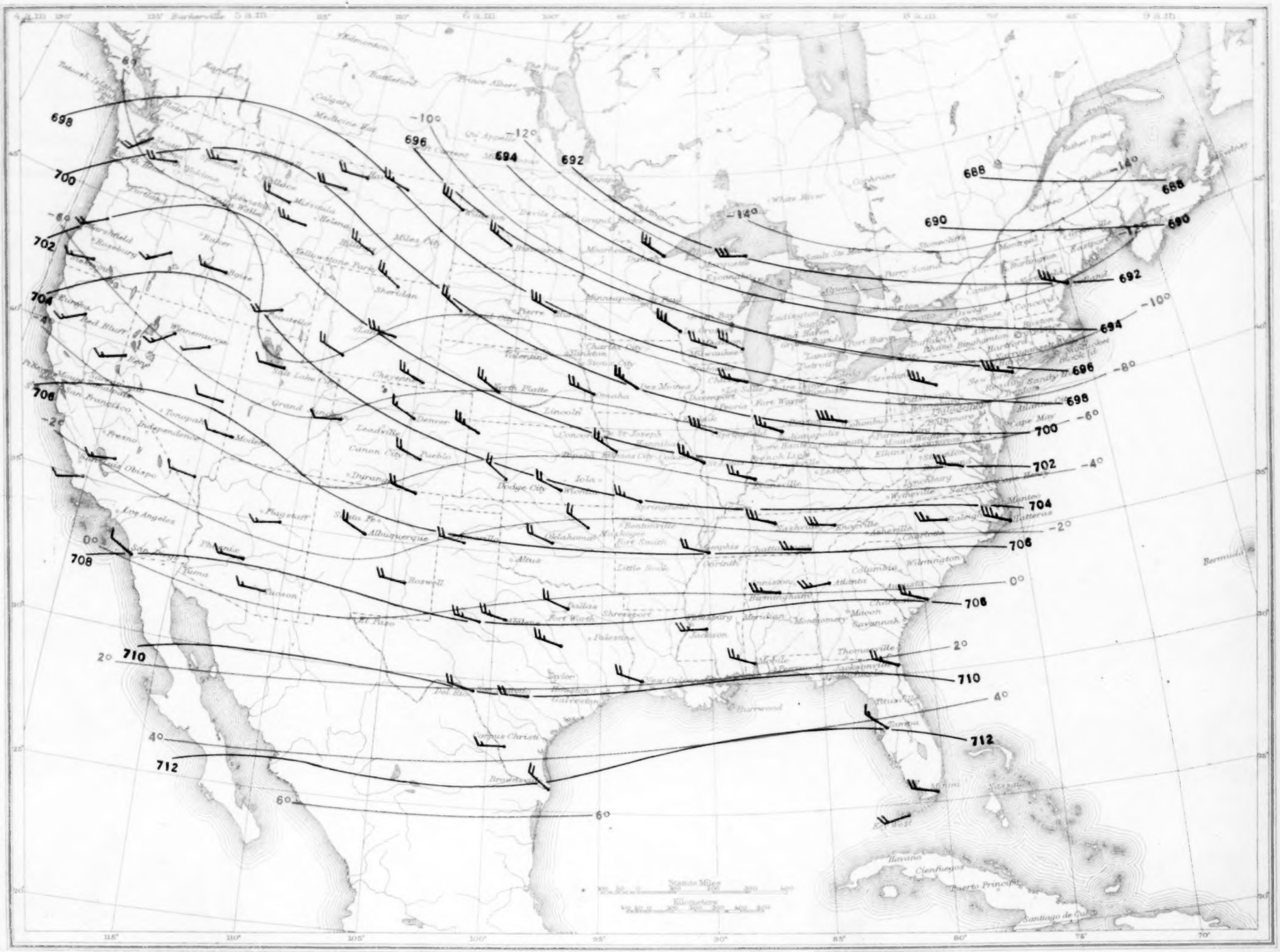
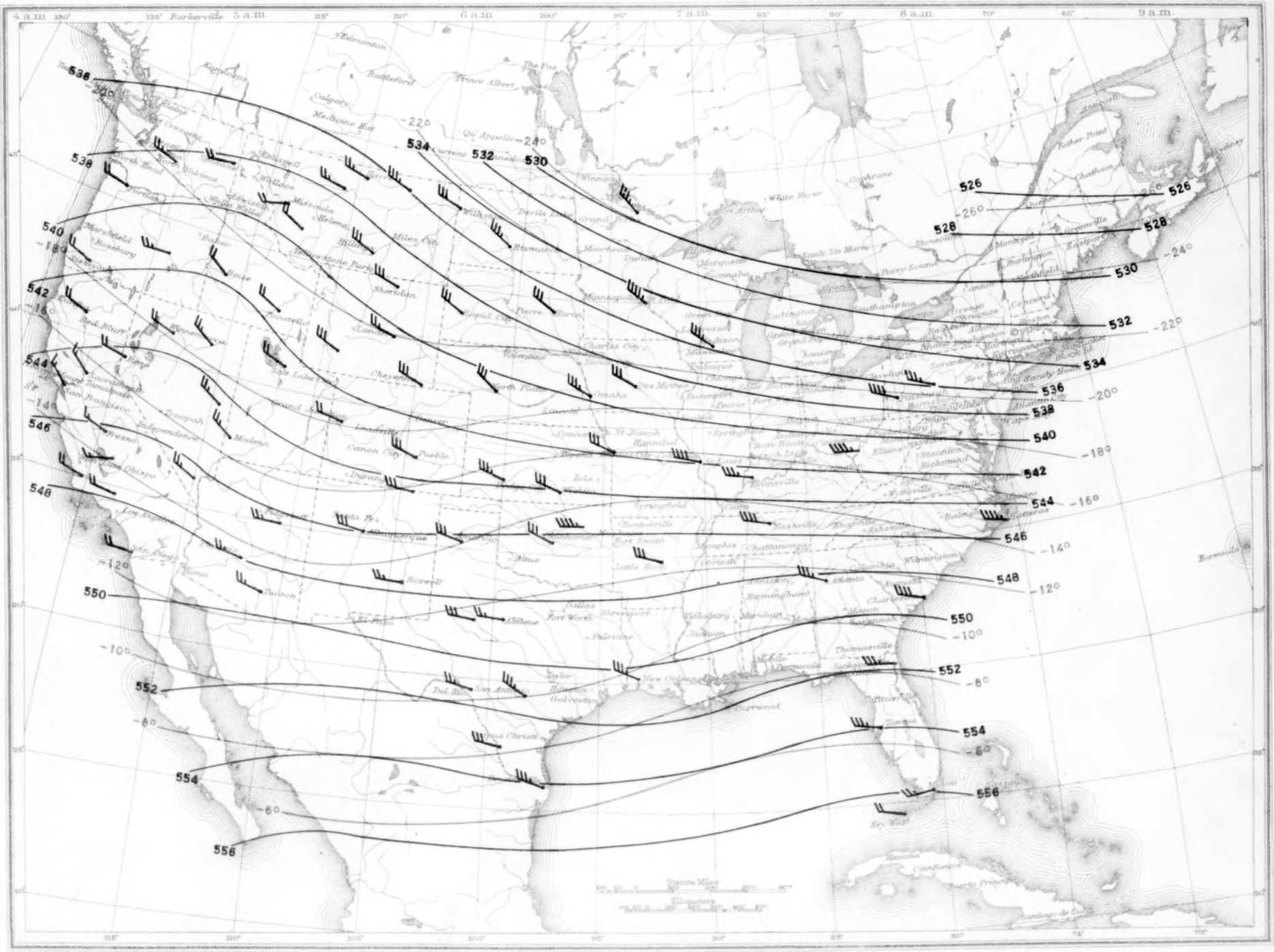

698
700
702
704
706
708
710
712
-10°
-12°
-14°
-8°
-6°
-4°
-2°
0°
2°
4°
6°
688
690
692
694
696
Edmonton
Calgary
Medicine Hat
Prince Albert
Winnipeg
Sault Ste. Marie
Montreal
Boise
Helena
Billings
Miles City
Sheridan
Pierre
Valentine
Chadron
North Platte
Omaha
Lincoln
Denver
Grand Junction
Salt Lake City
Cheyenne
Des Moines
Chicago
Detroit
Cleveland
Buffalo
Albany
Boston
Portland
Concordia
Topeka
Kansas City
St. Joseph
Pueblo
Canon City
Durango
Trinidad
Amarillo
Tulsa
Oklahoma
Little Rock
Memphis
Fort Smith
Albuquerque
Santa Fe
Flagstaff
Roswell
Phoenix
Yuma
Tucson
El Paso
Abilene
Fort Worth
Dallas
Shreveport
Jackson
Meridian
Birmingham
Atlanta
Columbus
Macon
Savannah
Montgomery
Corpus Christi
Brownsville
Galveston
Houston
Palestine
Taylor
Del Rio
Los Angeles
San Francisco
Fresno
Bakersfield
Red Bluff
Eureka
Reno
Winnemucca
Pocatello
Idaho Falls
Spokane
Lewiston
Missoula
Kalispell
Havre
Williston
Minot
Bismarck
Fargo
Duluth
Marquette
Sault Ste. Marie
Sudbury
Parry Sound
Toronto
Kingston
Ottawa
Quebec
Sherbrooke
Moncton
Yarmouth
Halifax
Sydney
Port Arthur
Fort William
Kenora
Prince Rupert
Dawson
Whitehorse
Fort Nelson
Peace River
Grande Prairie
Fort St. John
Dease Lake
Watson Lake
Norman Wells
Fort Simpson
Fort Smith
Yellowknife
Hay River
Fort Resolution
Fort Chipewyan
Lac La Biche
Edson
Jasper
Prince George
Williams Lake
Kamloops
Penticton
Vernon
Nelson
Cranbrook
Fort Steele
Revelstoke
Prince Rupert
Vancouver
Victoria
Seattle
Tatoosh Island
Quillayute
Astoria
Portland
Pendleton
Baker
Burns
Lakeview
Klamath Falls
Medford
Redding
Sacramento
Stockton
Fresno
Bakersfield
Santa Maria
San Luis Obispo
Los Angeles
San Diego
Yuma
Phoenix
Tucson
Douglas
Roswell
Albuquerque
Santa Fe
Flagstaff
Winslow
Prescott
Needles
Las Vegas
Tonopah
Independence
Bishop
Mojave
Fresno
Modesto
Stockton
Sacramento
Red Bluff
Eureka
Reno
Winnemucca
Elko
Ely

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) January 1944

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).


4 a.m.
5 a.m.
6 a.m.
7 a.m.
8 a.m.
9 a.m.
Eureka
Edmonton
Kamloops
Medicine Hat
Prince Albert
Qu'Appelle
Winnipeg
Sault Ste Marie
Parry Sound
Toronto
Kingston
Ottawa
Montreal
Quebec
Father Point
Chatham
Yarmouth
Bermuda
Spokane
Walla Walla
Missoula
Helena
Billings
Miles City
Bismarck
Minneapolis
Duluth
Marquette
Moorhead
Sheridan
Rapid City
Pierre
Huron
Aberdeen
Yellowstone Park
Boise
Pocatello
Salt Lake City
Cheyenne
North Platte
Omaha
Grand Island
Denver
Leadville
Canon City
Pueblo
Chicago
Milwaukee
Detroit
Cleveland
Buffalo
Rochester
Albany
Syracuse
Boston
New York
Sandy Hook
Block Is.
Portland
Roseburg
Marshfield
Eugene
Medford
Klamath Falls
Reno
Winnemucca
Elko
Ely
Tonopah
Las Vegas
Independence
Fresno
Modena
San Francisco
Santa Barbara
Santa Maria
Los Angeles
San Diego
Yuma
Phoenix
Tucson
Albuquerque
Roswell
Amarillo
Abilene
Fort Worth
Dallas
Shreveport
Palestine
Del Rio
San Antonio
Taylor
Galveston
Corpus Christi
Brownsville
Laredo
Monterrey
Chihuahua
Durango
Tola
Concordia
St. Joseph
Hannibal
Springfield
Peoria
Des Moines
Quincy
Kansas City
Topeka
Wichita
Dodge City
Goodland
Concordia
Fort Smith
Little Rock
Memphis
Corinth
Jackson
Meridian
Vicksburg
Monroe
Alexandria
Lake Charles
New Orleans
Mobile
Pensacola
Tallahassee
Jacksonville
Miami
Key West
Havana
Cienfuegos
Santiago de Cuba
Puerto Principe
Kingston
Nashville
Knoxville
Asheville
Chattanooga
Birmingham
Montgomery
Atlanta
Columbus
Macon
Savannah
Charleston
Wilmington
Raleigh
Richmond
Norfolk
Hatteras
Lynchburg
Roanoke
Charlottesville
Harrisburg
Pittsburgh
Erie
Toledo
Fort Wayne
Indianapolis
Evansville
Terre Haute
Springfield
Bloomington
Lansing
Grand Rapids
Escanaba
Port Arthur
Cochrane
White River
Deville
Grand Rapids
Winnipeg
Moosonee
Stonecliffe
Montpelier
Eastport
Charlottetown
Sydney
Yarmouth
Halifax
Father Point
Anticosti
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Detroit
Cleveland
Pittsburgh
Harrisburg
Philadelphia
Atlantic City
Baltimore
Washington
Norfolk
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Spokane
Wallace
Wenatchee
Yakima
Seattle
Tatoosh Island
Quillayute
Astoria
Portland
Roseburg
Marshfield
Eugene
Medford
Klamath Falls
Reno
Winnemucca
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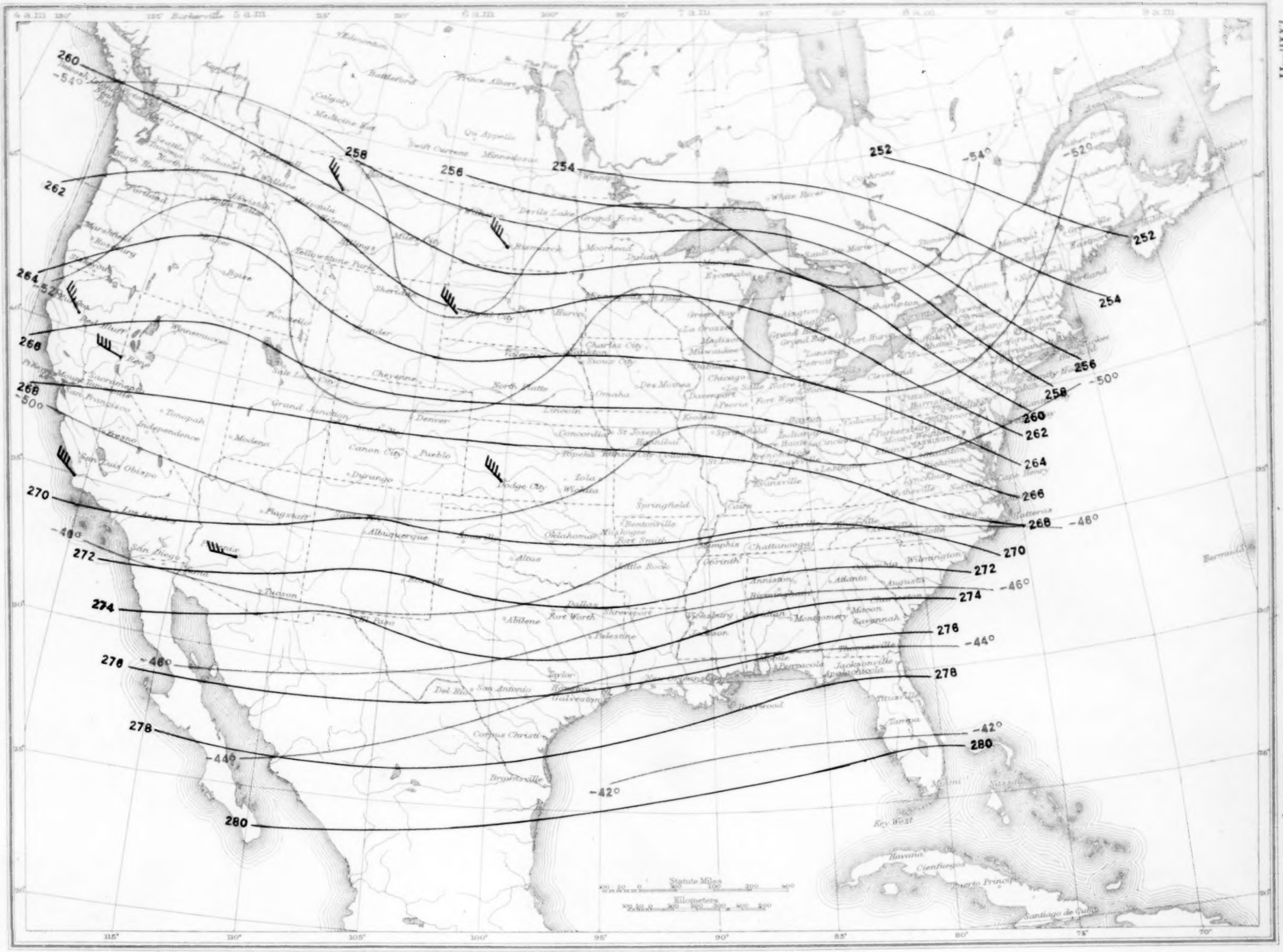
Santa Barbara
Santa Maria
Los Angeles
San Diego
Yuma
Phoenix
Tucson
Albuquerque
Roswell
Amarillo
Abilene
Fort Worth
Dallas
Shreveport
Palestine
Del Rio
San Antonio
Taylor
Galveston
Corpus Christi
Brownsville
Laredo

Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) January 1944

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.)



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DECEMBER 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m .s .l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot balloon observations at 5:00 a. m. (E. S. T.)

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m .s .l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

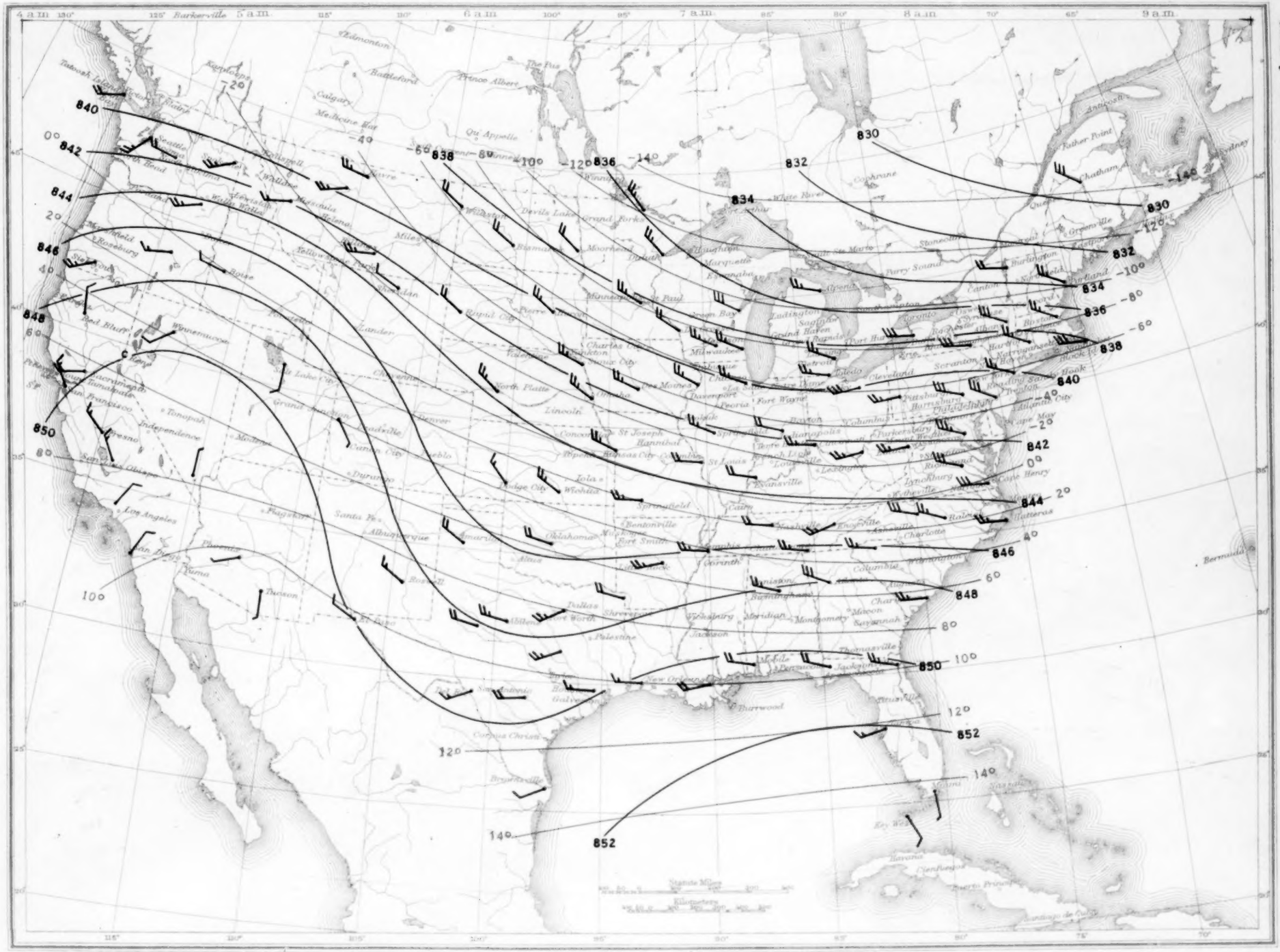


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

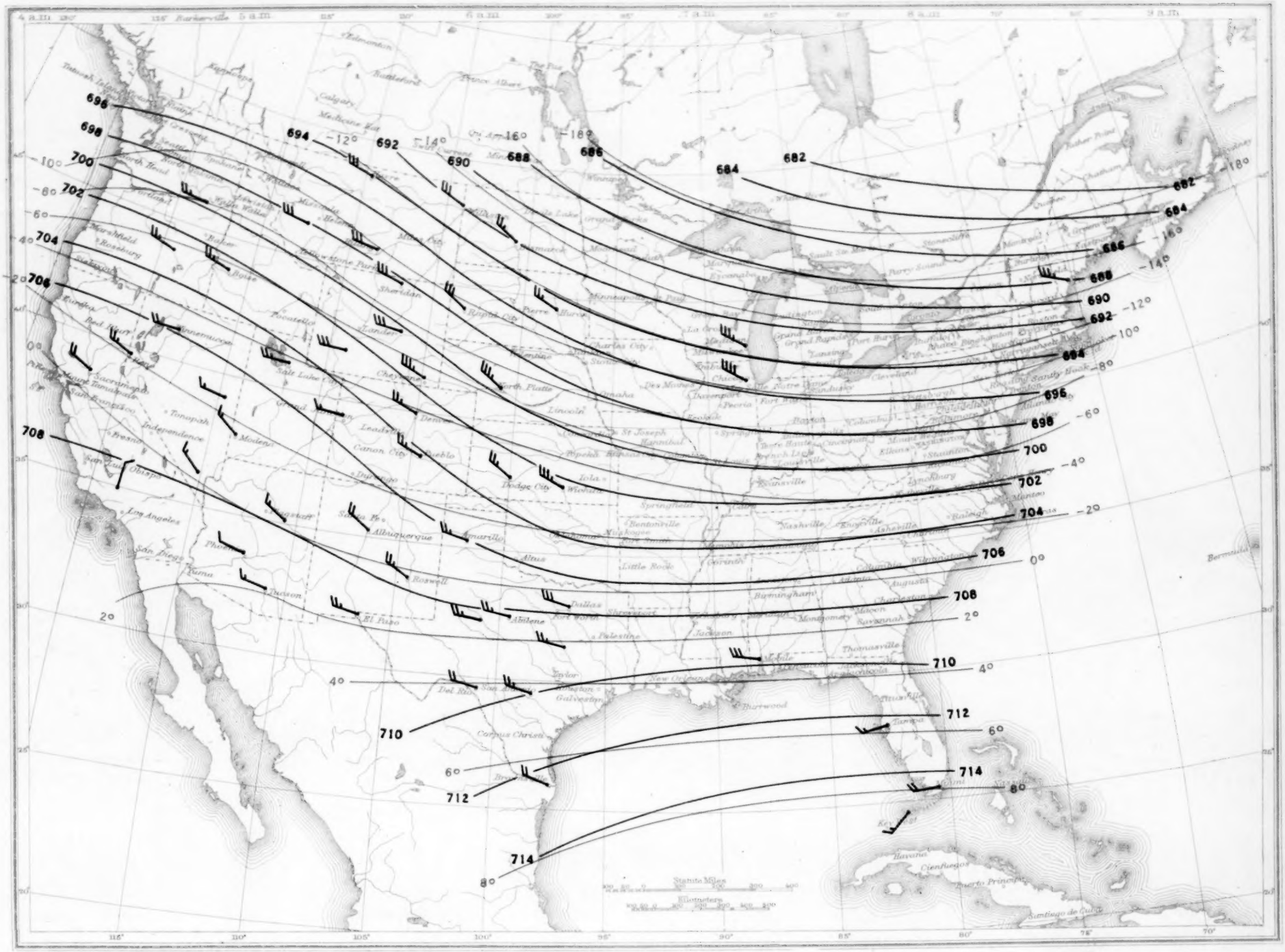


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

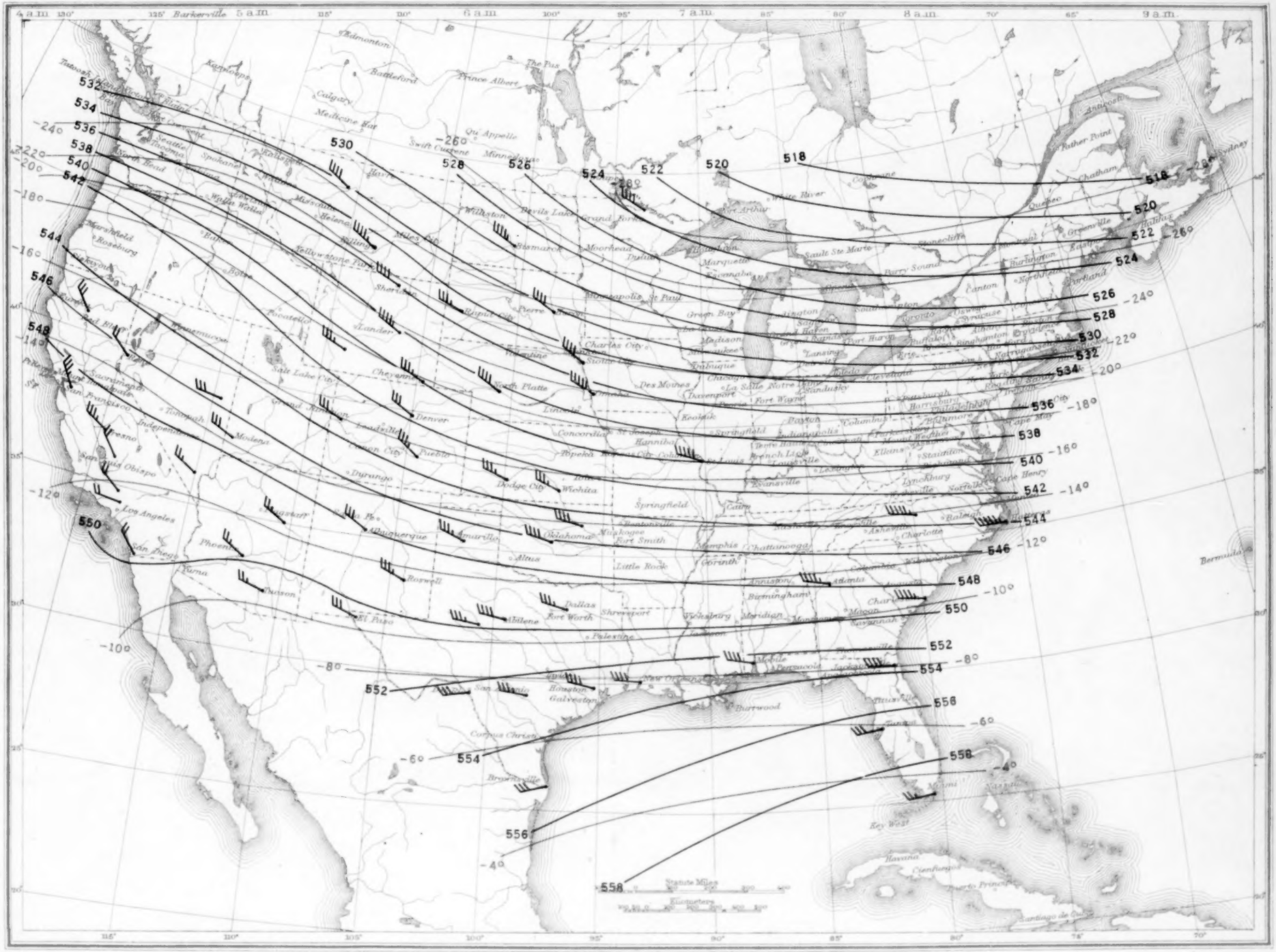


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) December 1942

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

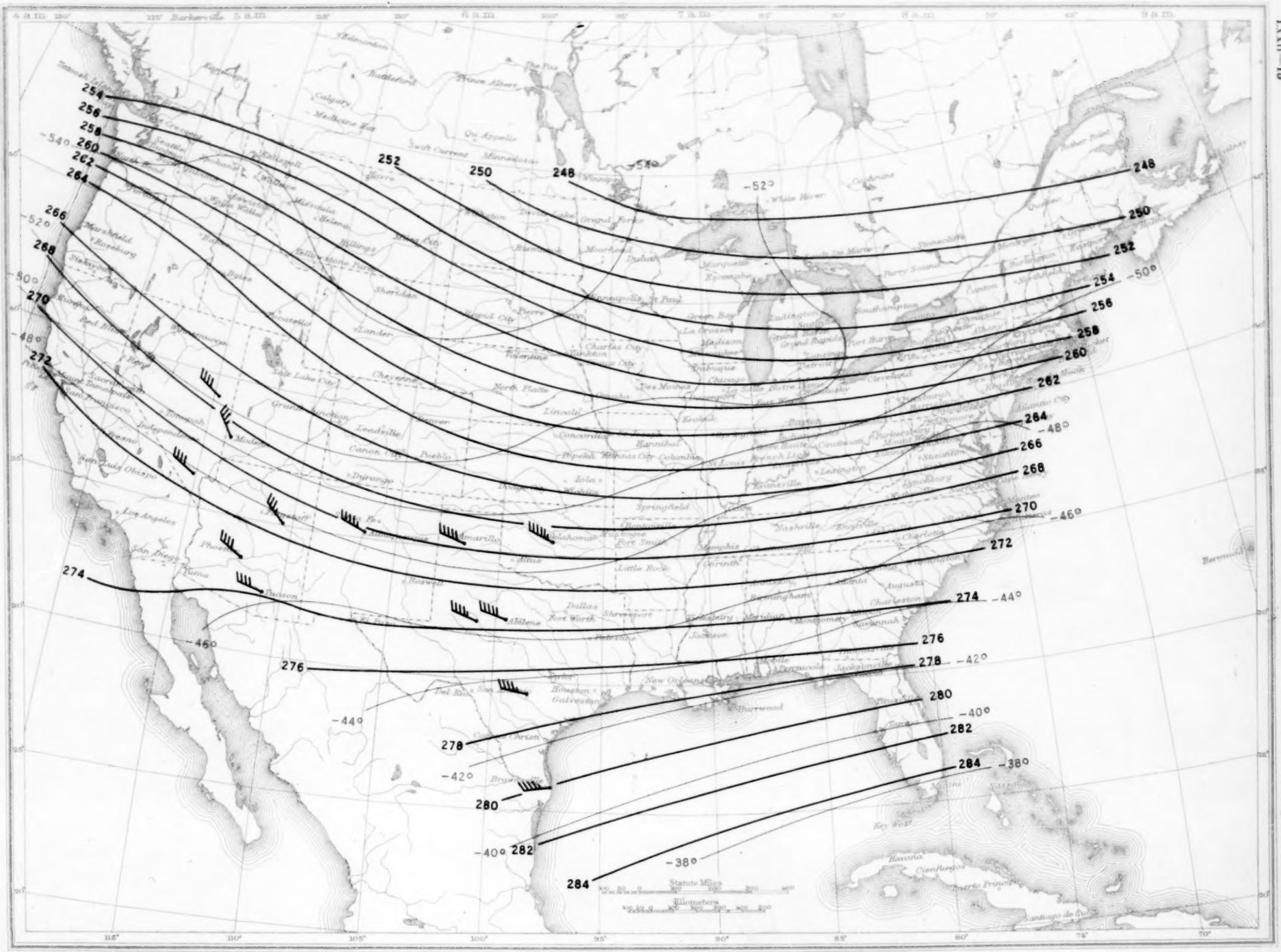


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m .s .l.) January 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m .s .l.) January 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

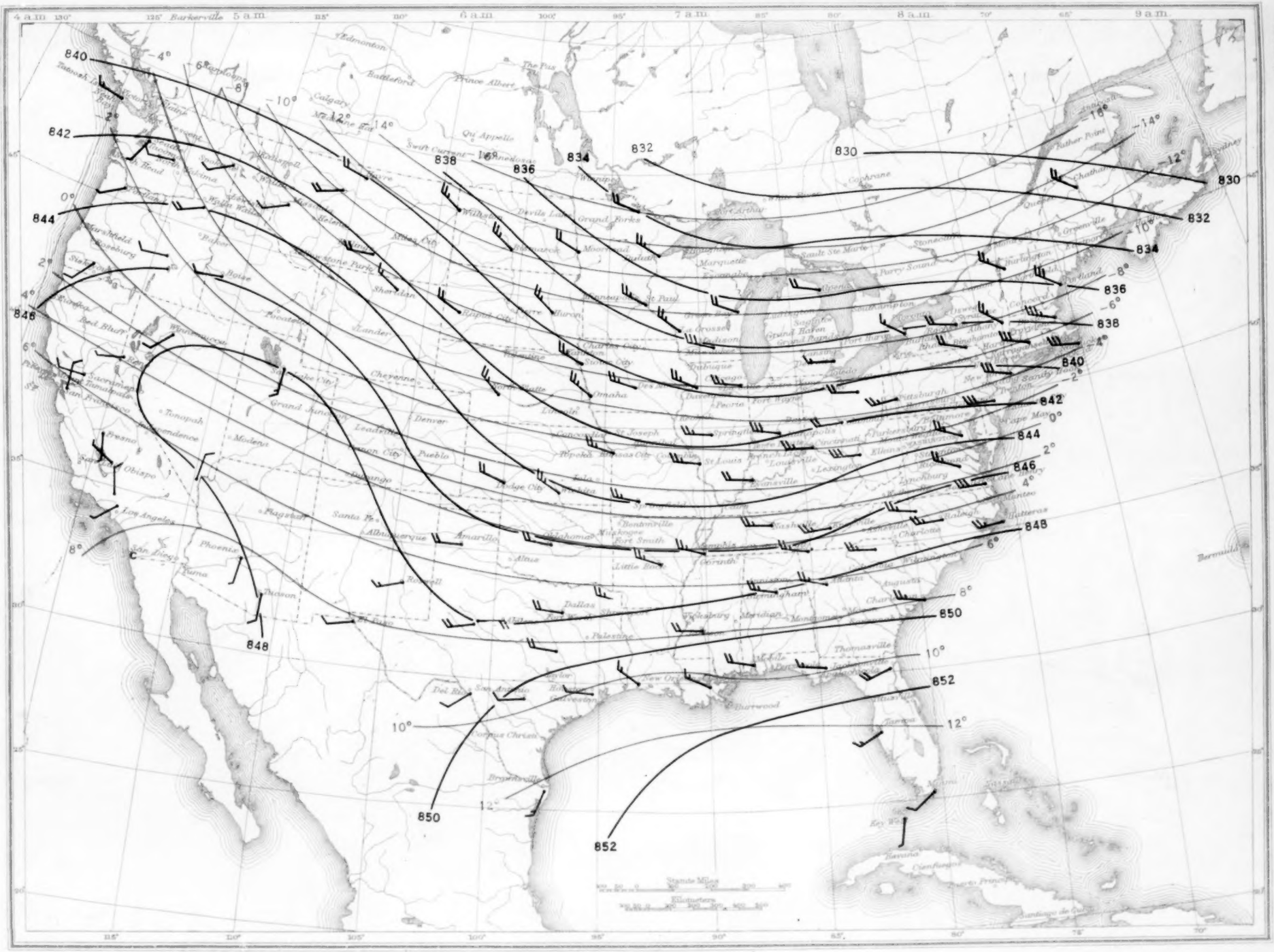


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) January 1943

Isobars and Isotherms based on radiosonde observatione at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

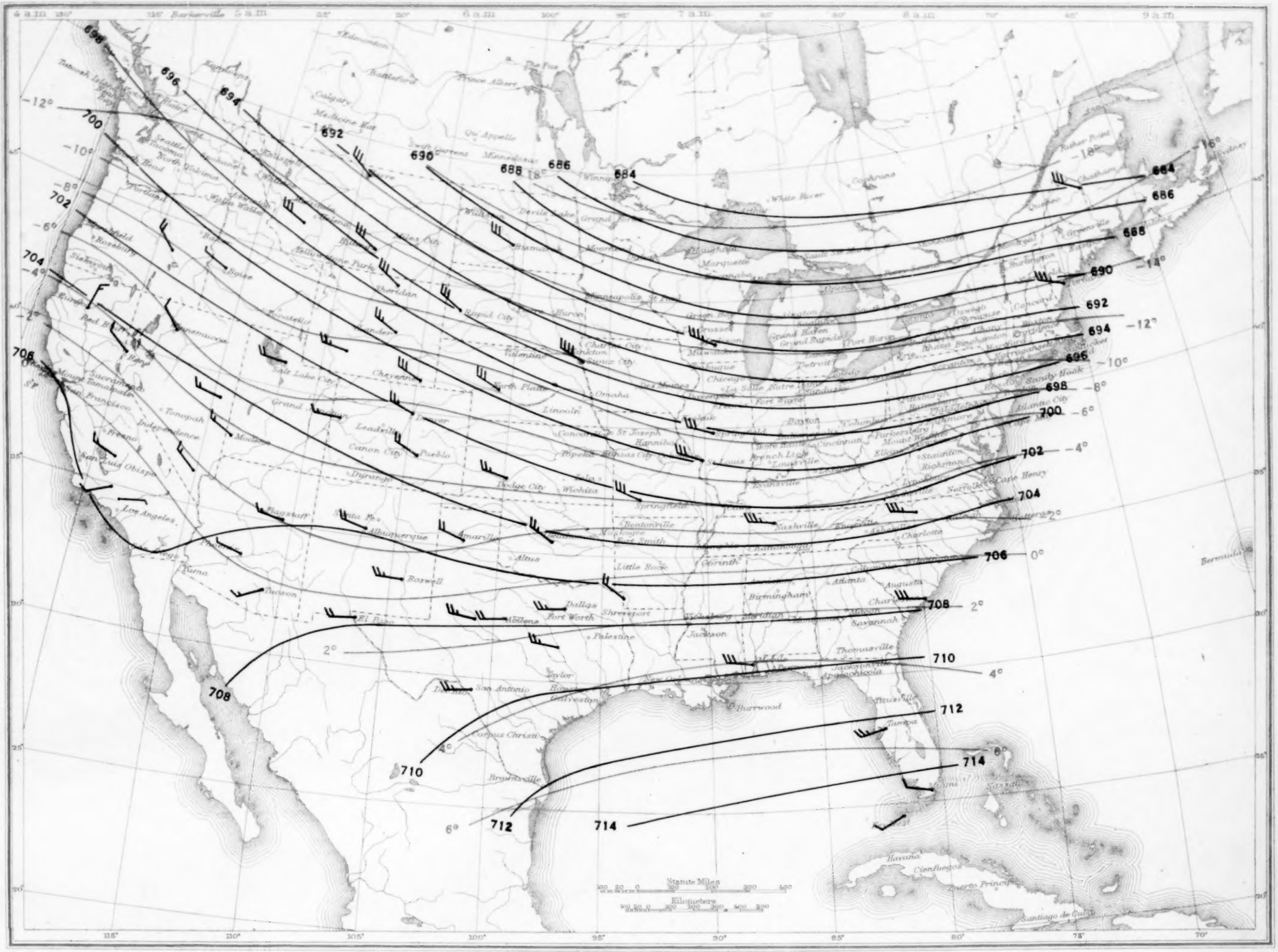


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) January 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) January 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

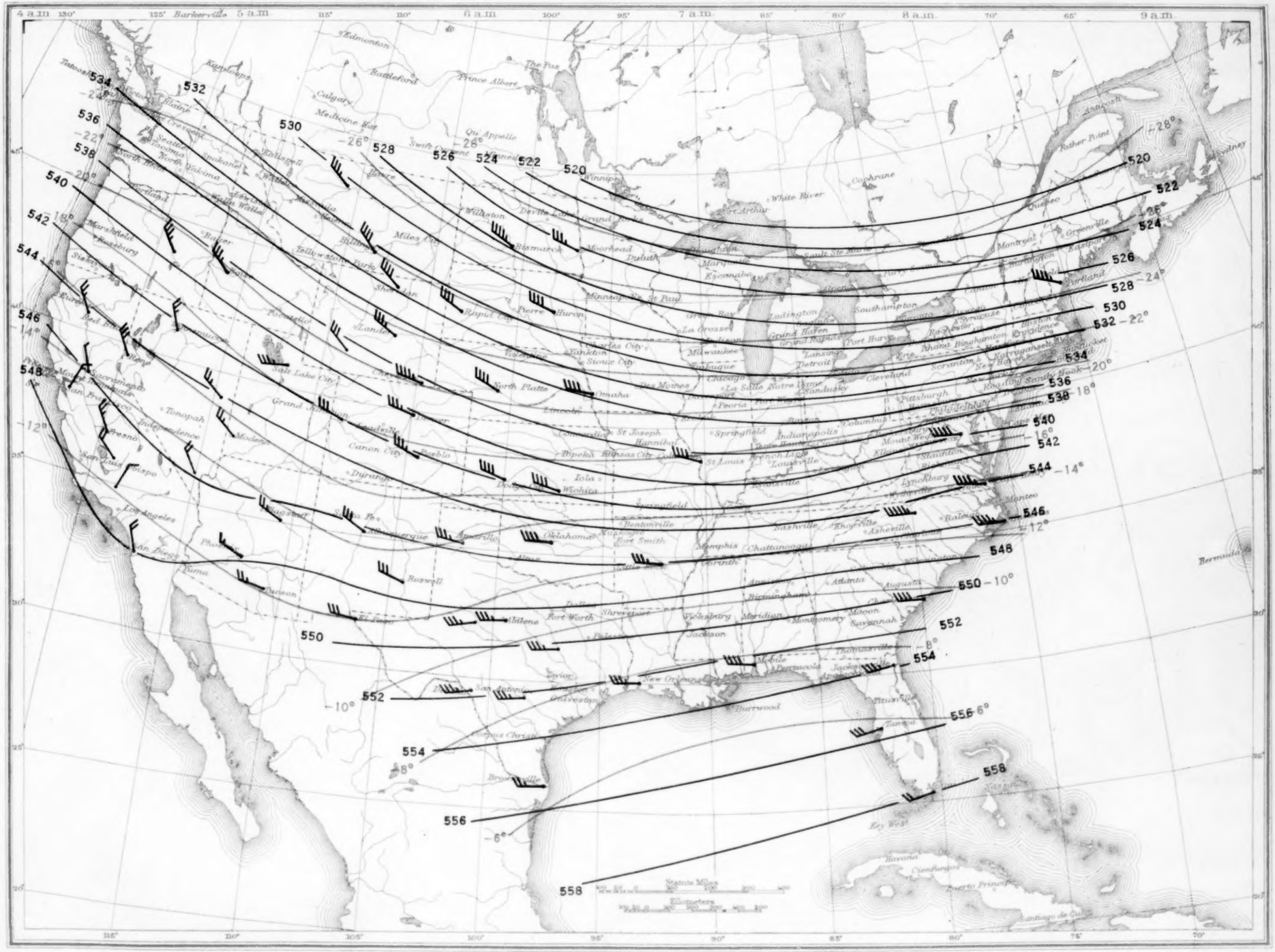


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) January 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

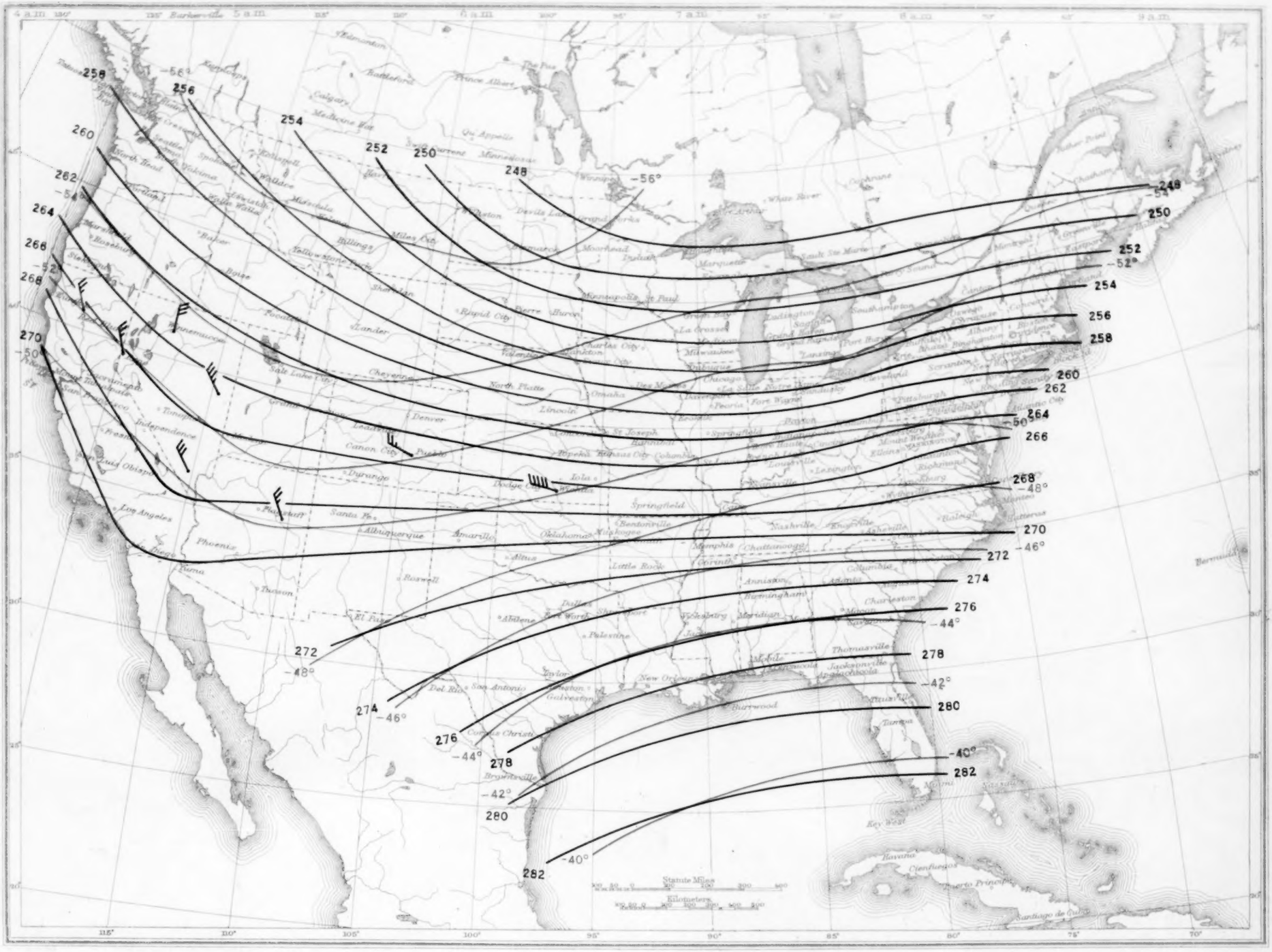


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m .s .l.) February 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m.s.l.) February 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

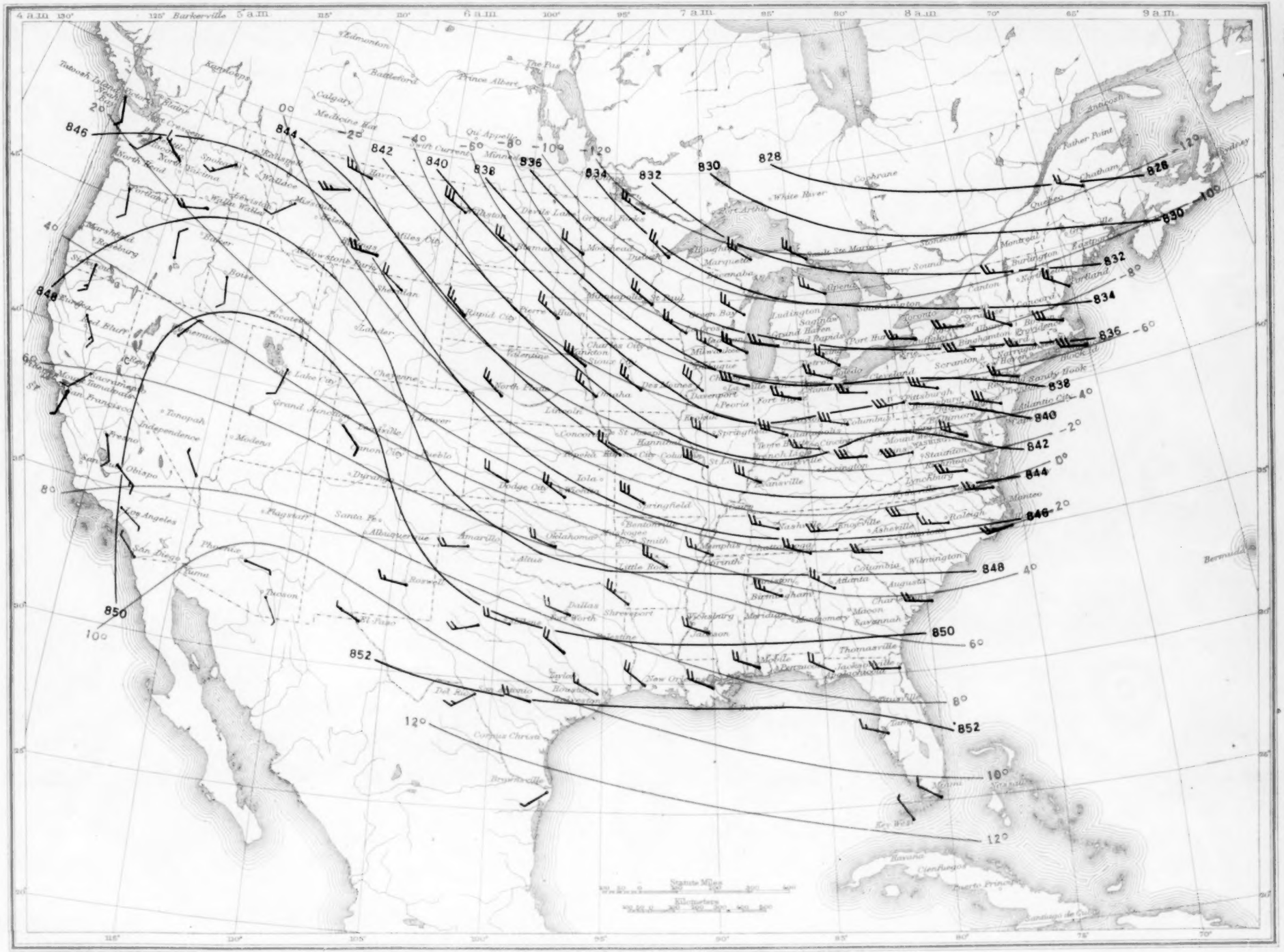


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) February 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

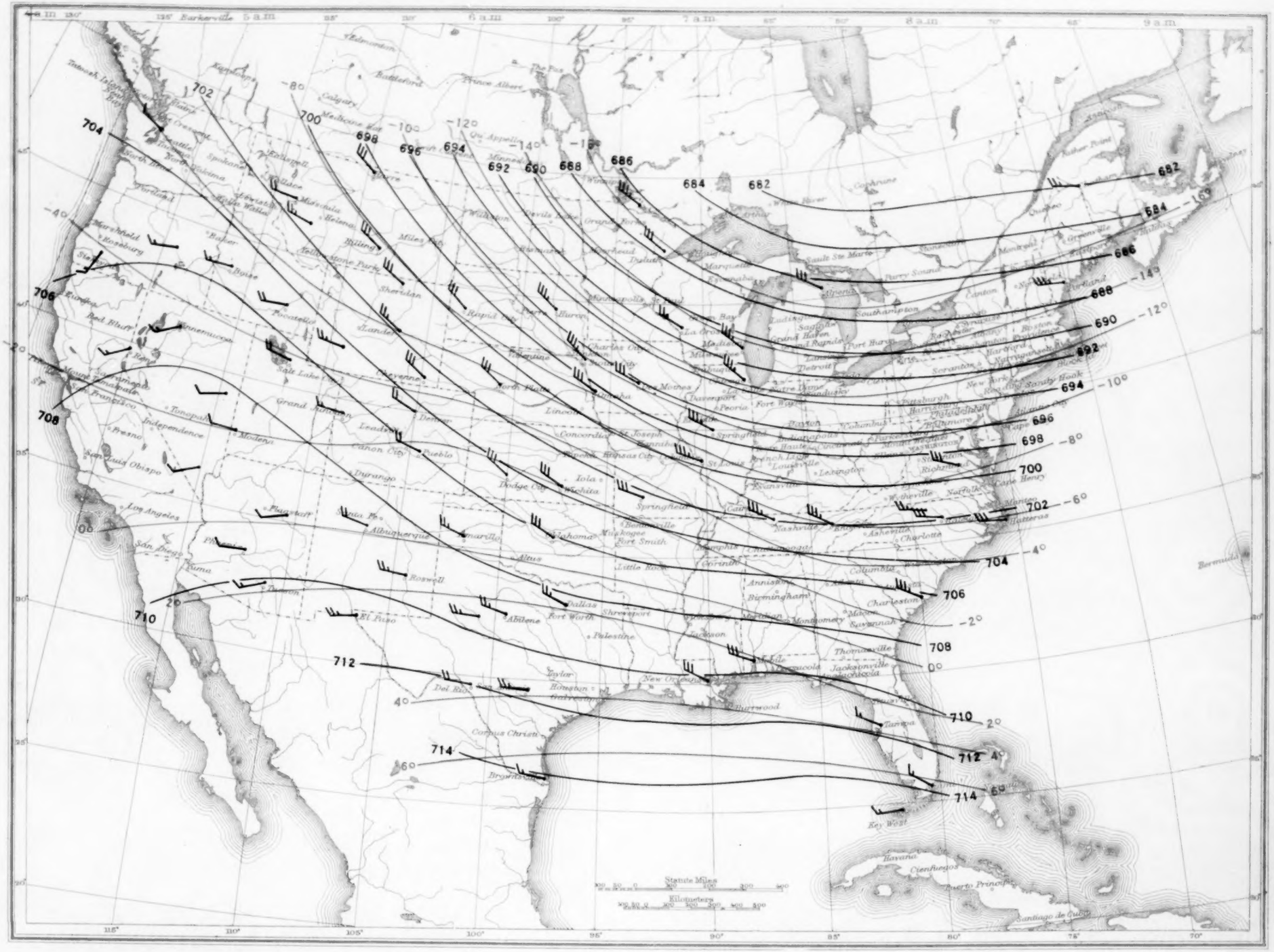


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) February 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) February 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

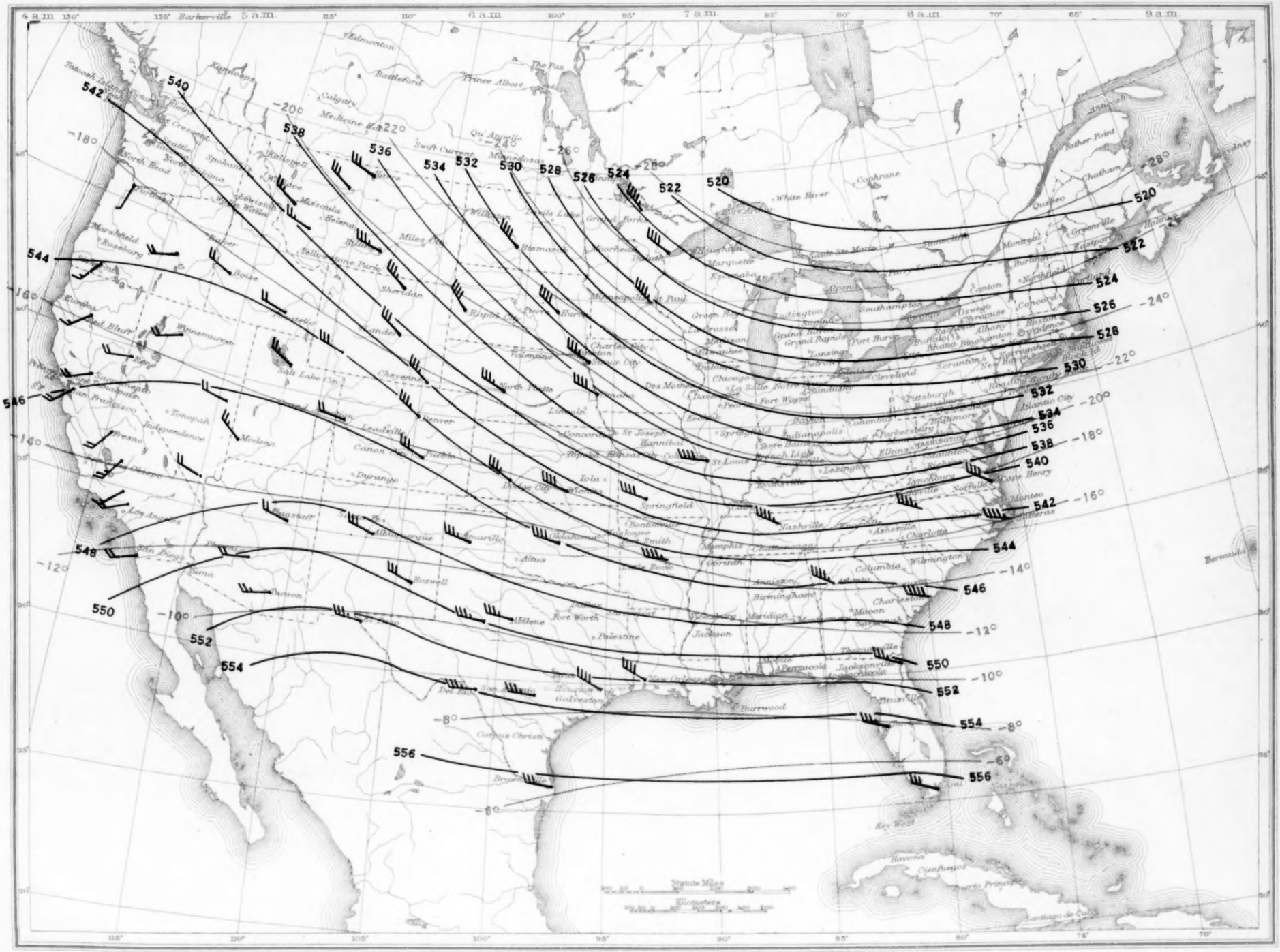


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) February 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

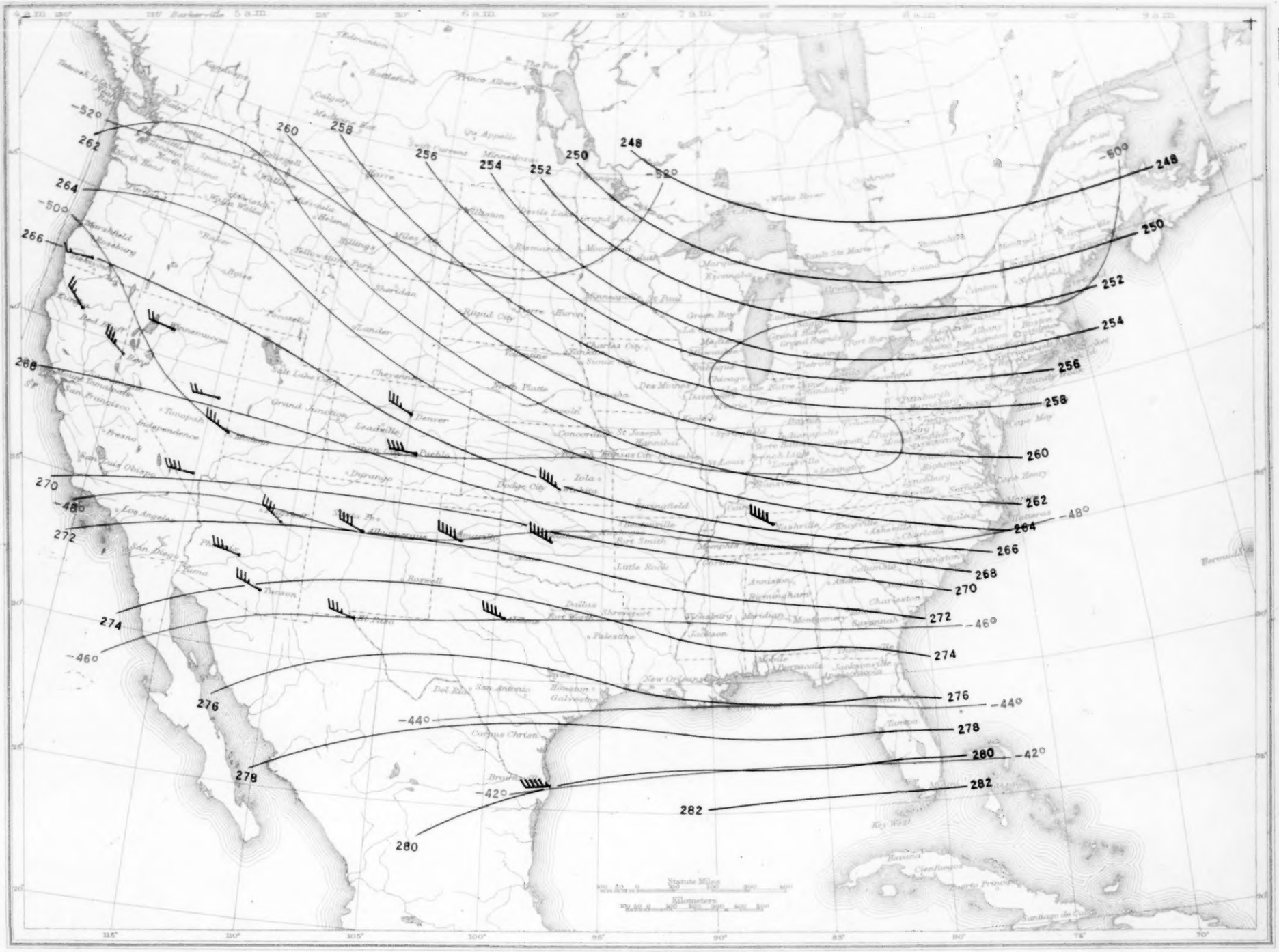


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

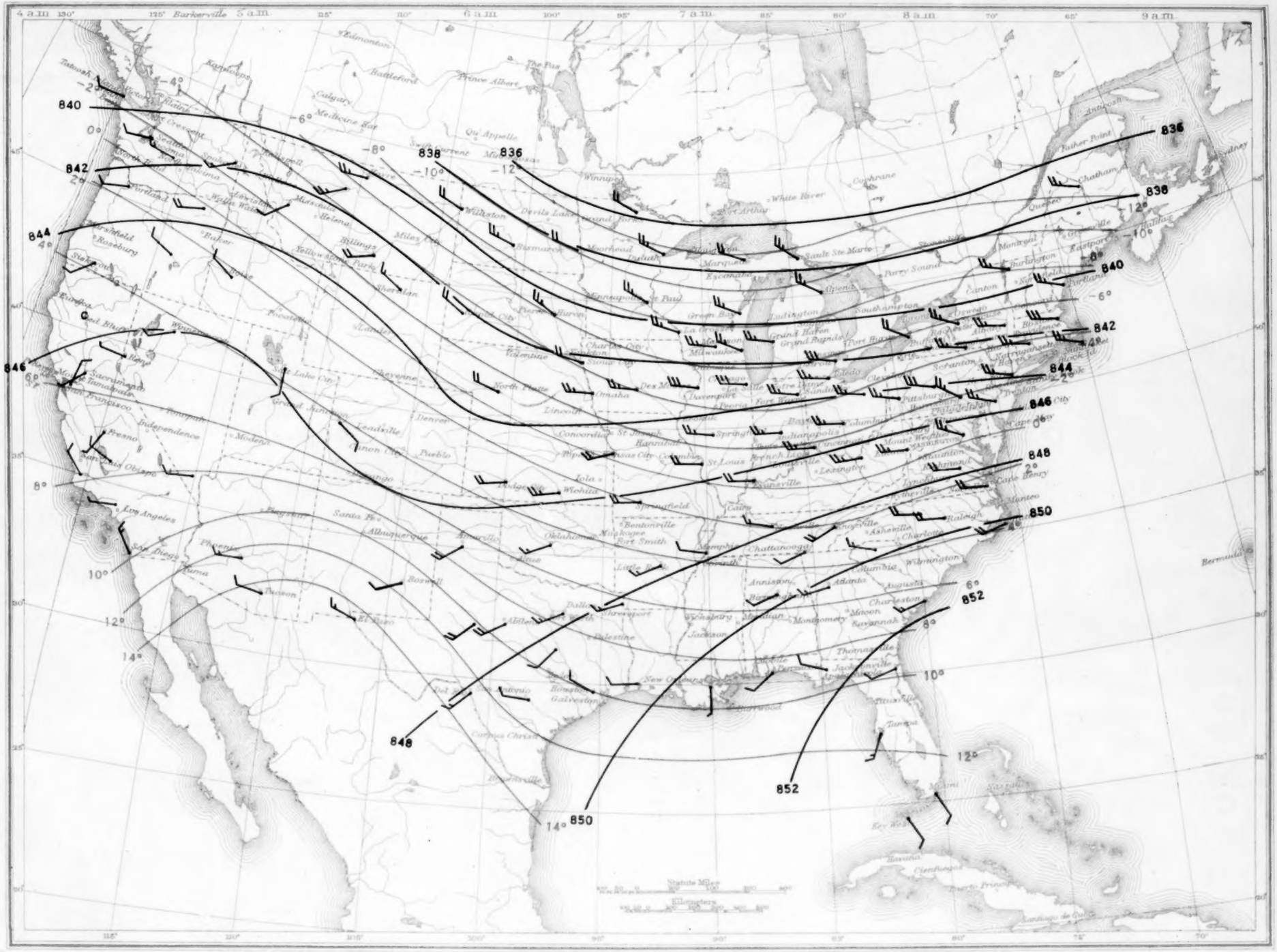


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

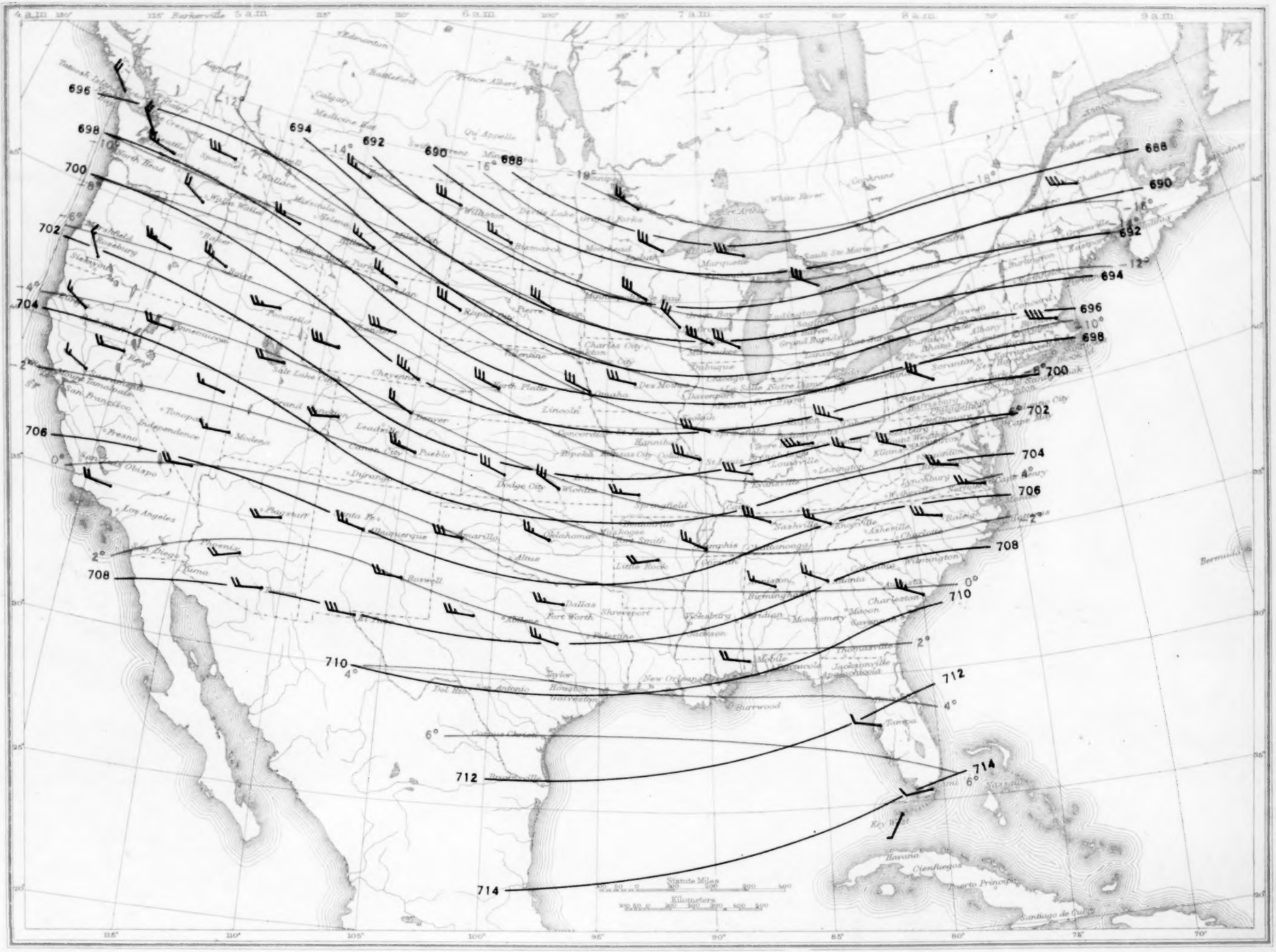
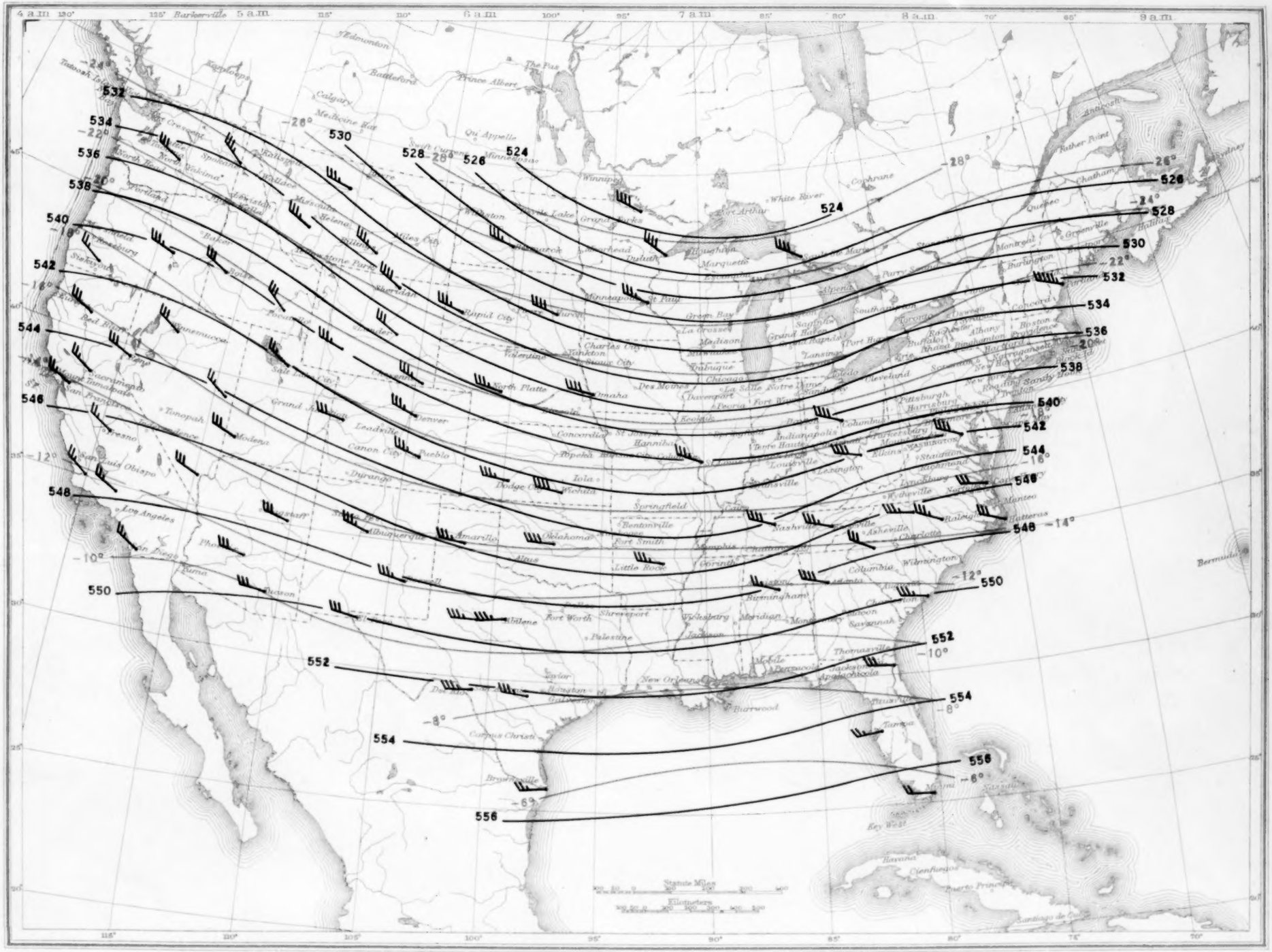


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).


4 a.m.
5 a.m.
6 a.m.
7 a.m.
8 a.m.
9 a.m.
Barkerville
Edmonton
Battleford
Prince Albert
The Pas
Calgary
Medicine Hat
Qu'Appelle
Winnipeg
White River
Cochrane
Port Arthur
Quebec
Anticosti
Father Point
Sydney
Chatham
Fredericton
Halifax
Greenville
Montreal
Burlington
Concord
Boston
Providence
Albany
Syracuse
Toronto
Kingston
Oswego
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Erie
Detroit
Cleveland
Toledo
Chicago
Milwaukee
Grand Haven
Saginaw
Port Huron
Lansing
Fabyan
Portland
Spokane
Kalispell
Helena
Billings
Miles City
Williston
Minot
Grand Forks
Devils Lake
Bismarck
Huron
Rapid City
Aberdeen
Pierre
Valentine
Yankton
Sioux City
Omaha
North Platte
Des Moines
Davenport
Peoria
Fort Wayne
La Salle
Notre Dame
Kenosha
Madison
La Crosse
Green Bay
Marquette
Ishpeming
Duluth
Minneapolis
St. Paul
Parry Sound
Sault Ste. Marie
Seattle
Tatoosh Is.
Kamloops
Penticton
Nelson
Kelowna
Wenatchee
Yakima
Walla Walla
Lewiston
Pullman
Moscow
Coeur d'Alene
Kellogg
Wallace
Missoula
Butte
Bozeman
Livingston
Glasgow
Havre
Great Falls
Lethbridge
Swift Current
Moose Jaw
Regina
Prince Albert
Saskatoon
Battleford
Medicine Hat
Calgary
Edmonton
Prince Rupert
Ocean Falls
Alert Bay
Port Hardy
Victoria
Tatoosh Is.
Quillayute
Astoria
Portland
Salem
Eugene
Roseburg
Medford
Klamath Falls
Redding
Red Bluff
Sacramento
San Francisco
Oakland
Fresno
Modesto
Tonopah
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Winnemucca
Elko
Ely
Salt Lake City
Provo
Grand Junction
Denver
Leadville
Pueblo
Canon City
Durango
Santa Fe
Albuquerque
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Flagstaff
Winslow
Needles
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Phoenix
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Roswell
Amarillo
Clayton
Dodge City
Concordia
Topeka
Kansas City
St. Joseph
Hannibal
Springfield
Columbia
Jefferson City
Rolla
Joplin
Tulsa
Oklahoma
Wichita
Lamar
Goodland
Hays
North Platte
Scottsbluff
Valentine
Rapid City
Huron
Aberdeen
Williston
Minot
Grand Forks
Devils Lake
Bismarck
Dickinson
Miles City
Billings
Bozeman
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Great Falls
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Glasgow
Lewistown
Kalispell
Wallace
Kellogg
Coeur d'Alene
Moscow
Pullman
Lewiston
Yakima
Walla Walla
Wenatchee
Spokane
Kelowna
Nelson
Penticton
Kamloops
Williams Lake
Prince George
Dawson
Whitehorse
Fort Nelson
Peace River
Grande Prairie
Edmonton
Battleford
Prince Albert
The Pas
Winnipeg
Kenora
Fort Frances
Port Arthur
White River
Sault Ste. Marie
Parry Sound
Muskoka
Trenton
Ottawa
Cochrane
Timmins
Sudbury
North Bay
Pembroke
Kingston
Toronto
Oswego
Rochester
Buffalo
Erie
Detroit
Cleveland
Toledo
Chicago
Milwaukee
Grand Haven
Saginaw
Port Huron
Lansing

Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) March 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

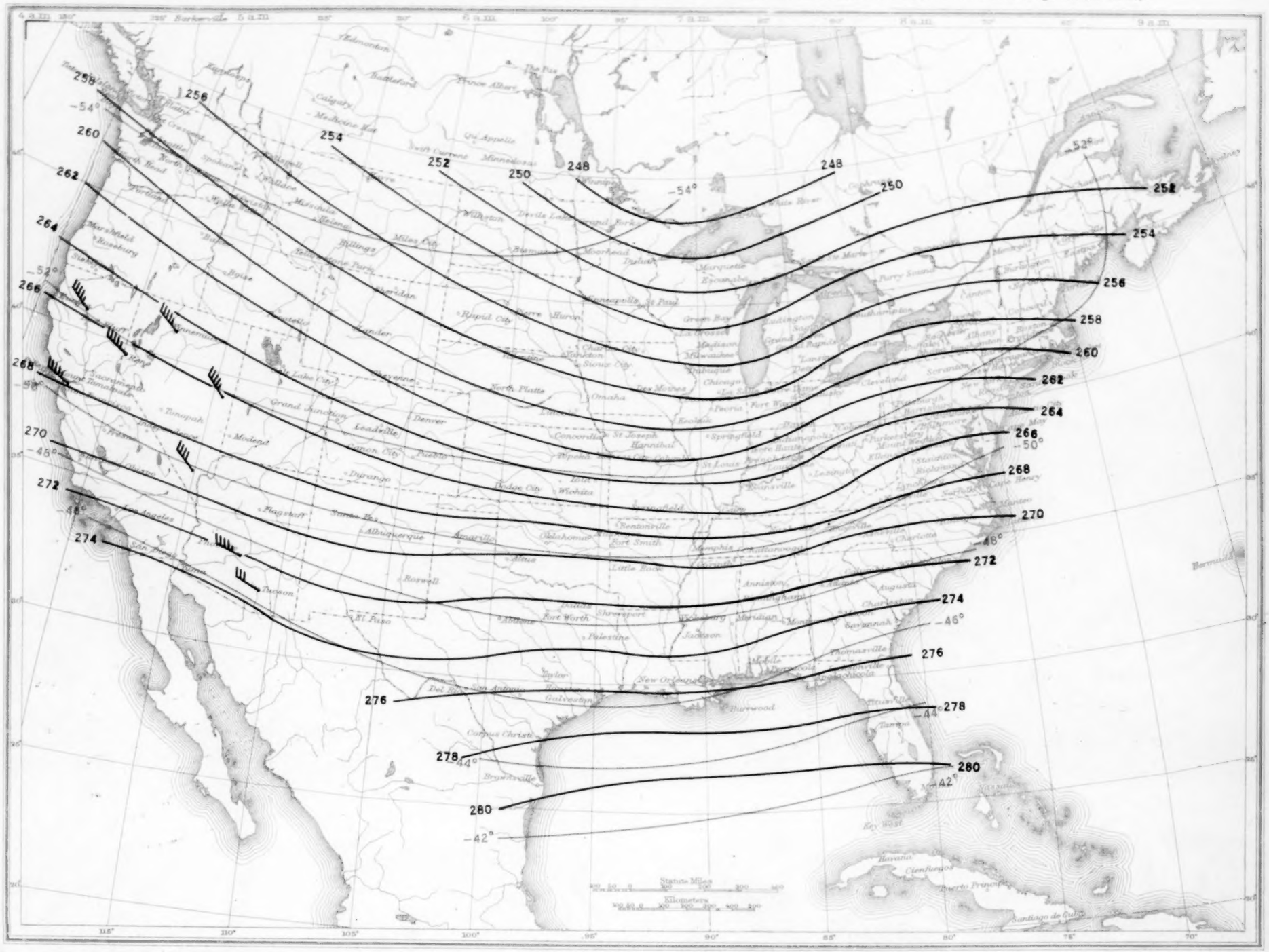


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) April 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) April 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

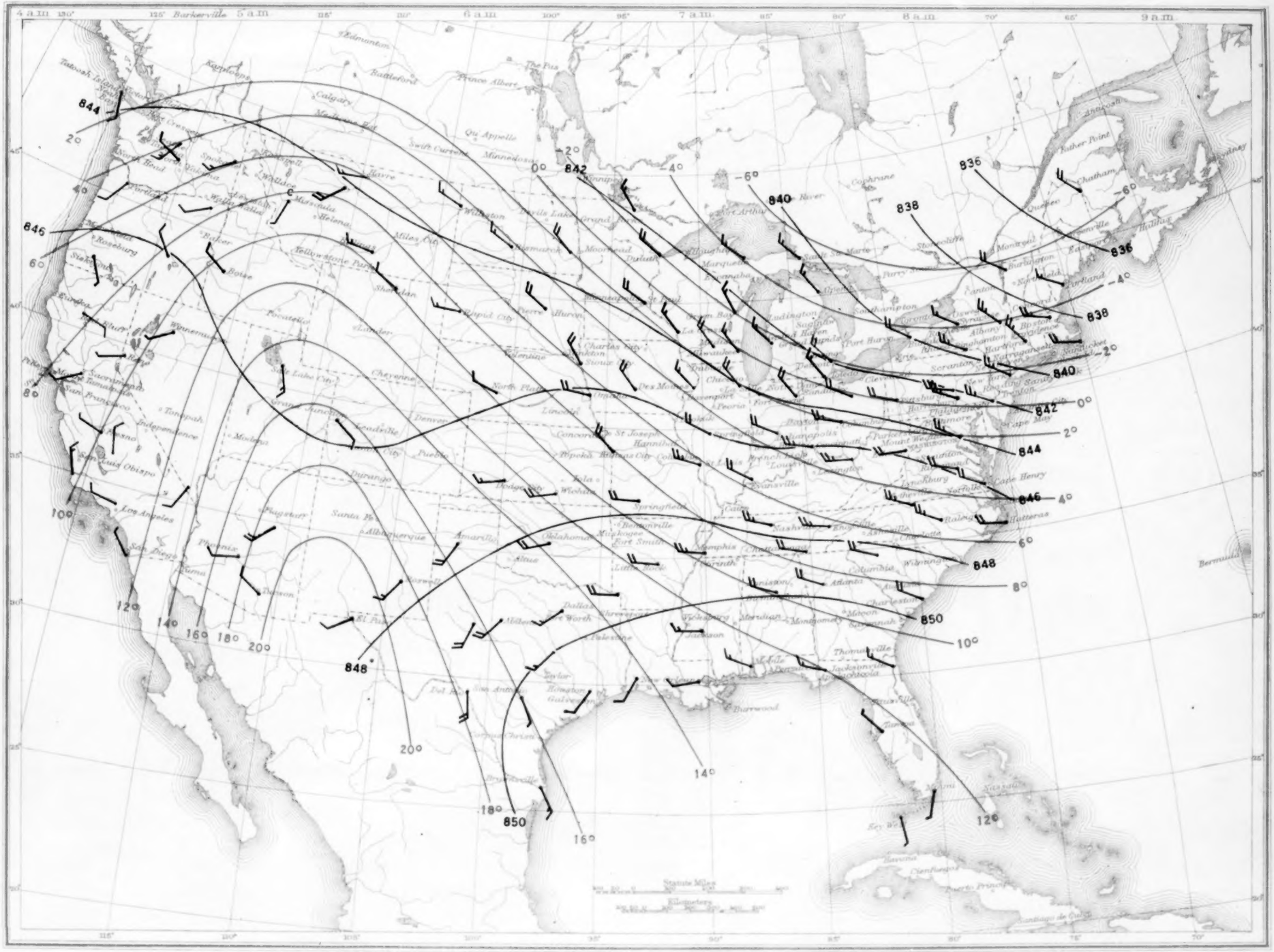


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) April 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

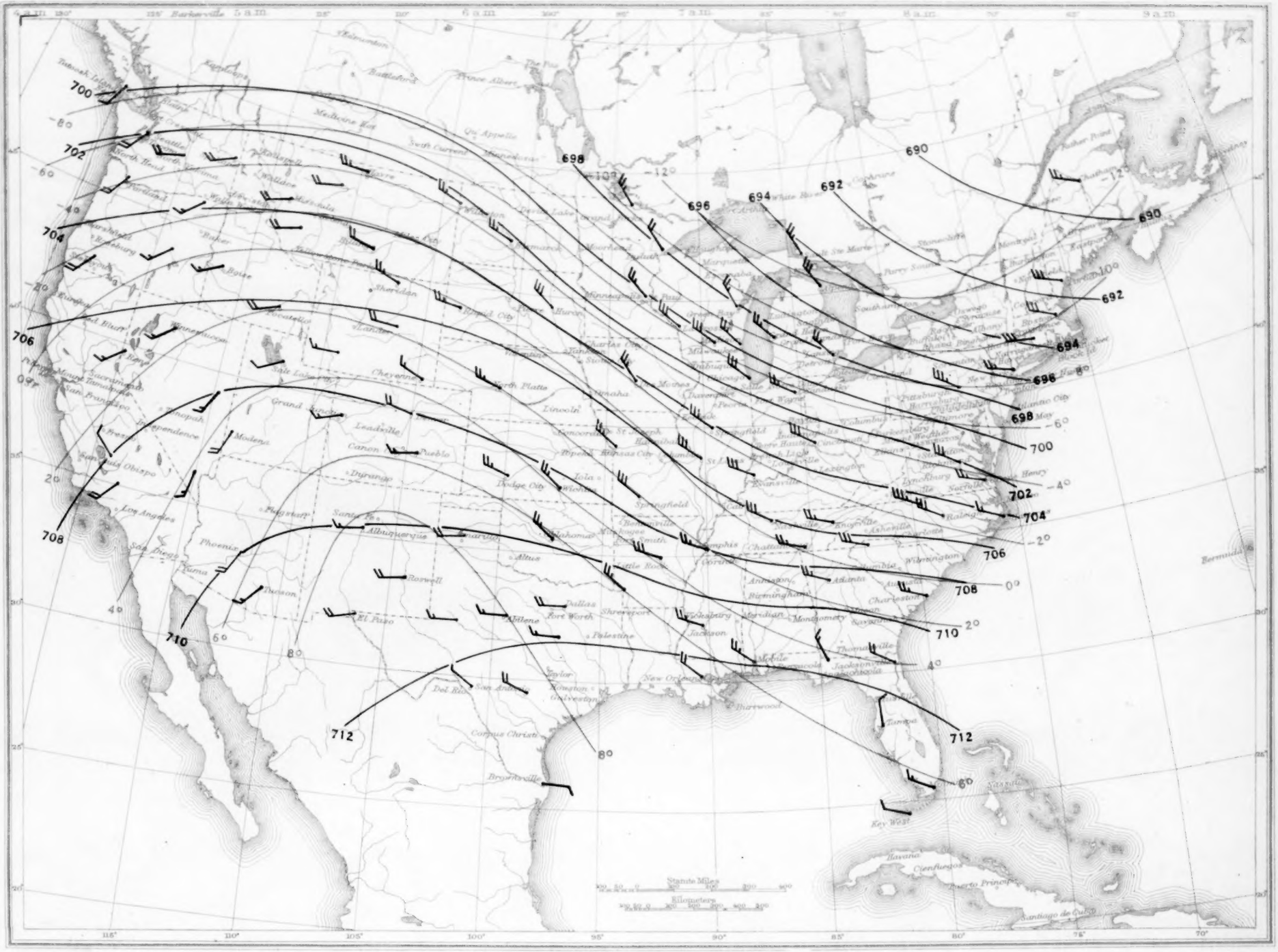


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) April 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) April 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

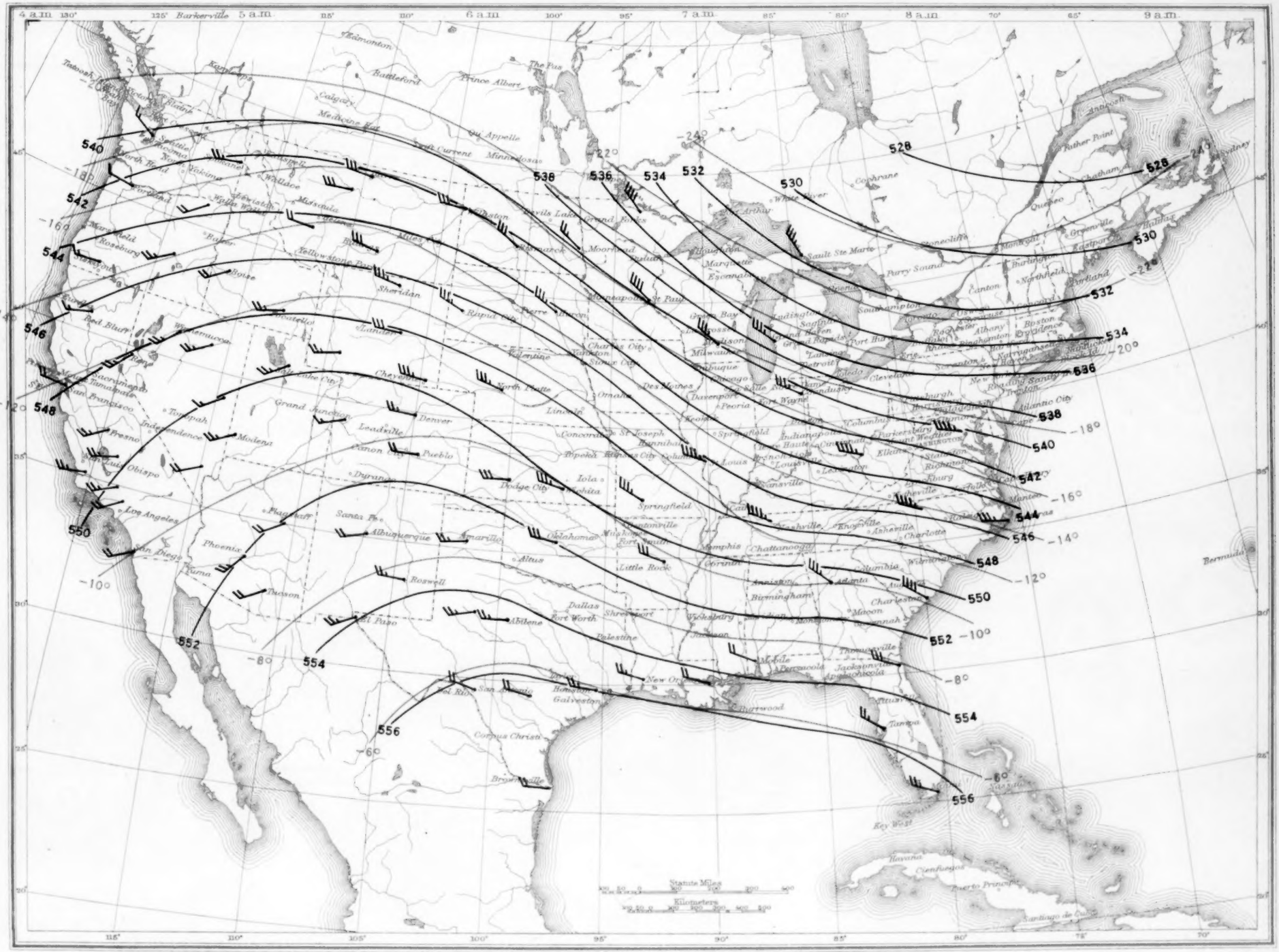


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) April 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

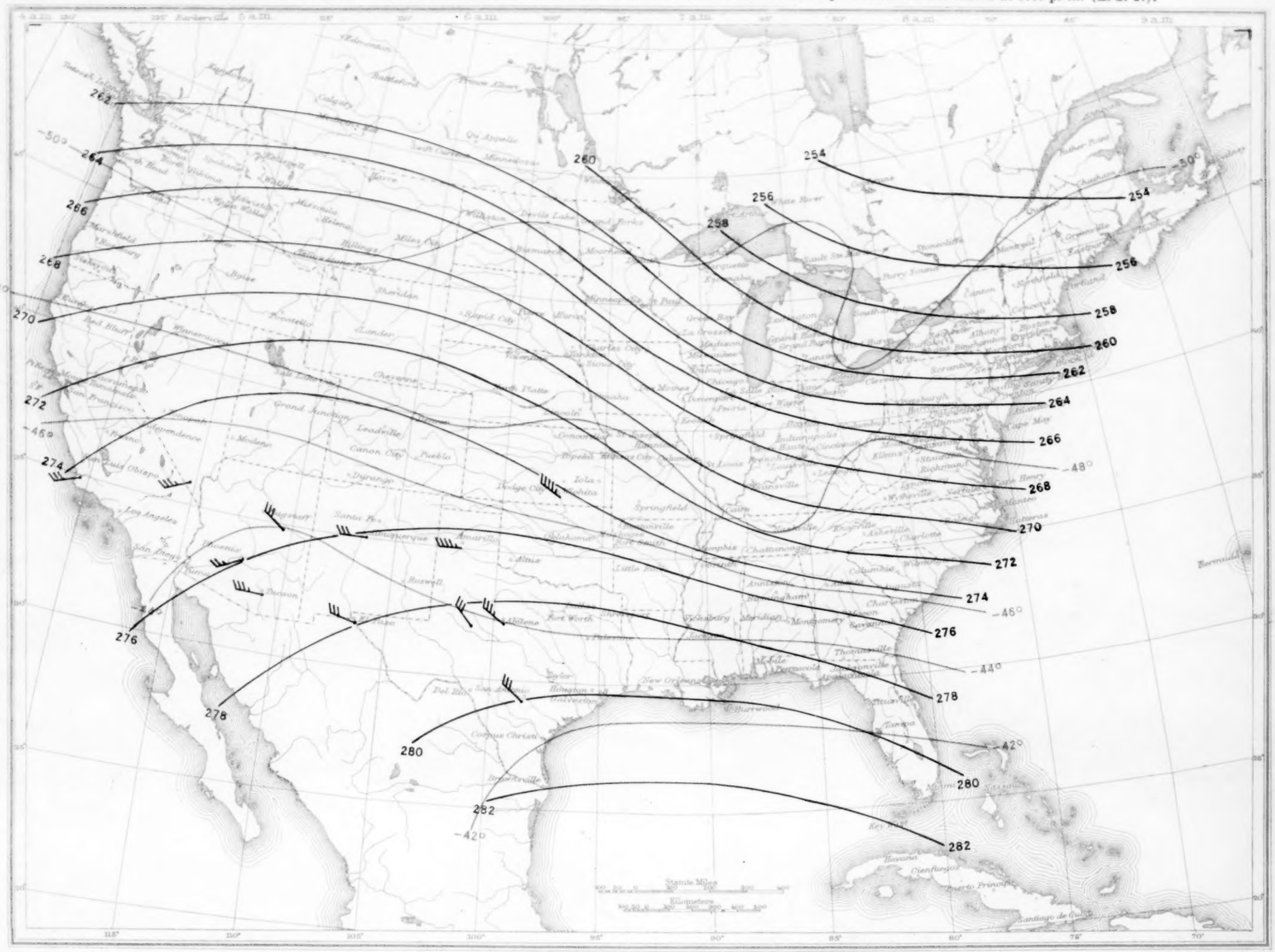


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) May 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) May 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

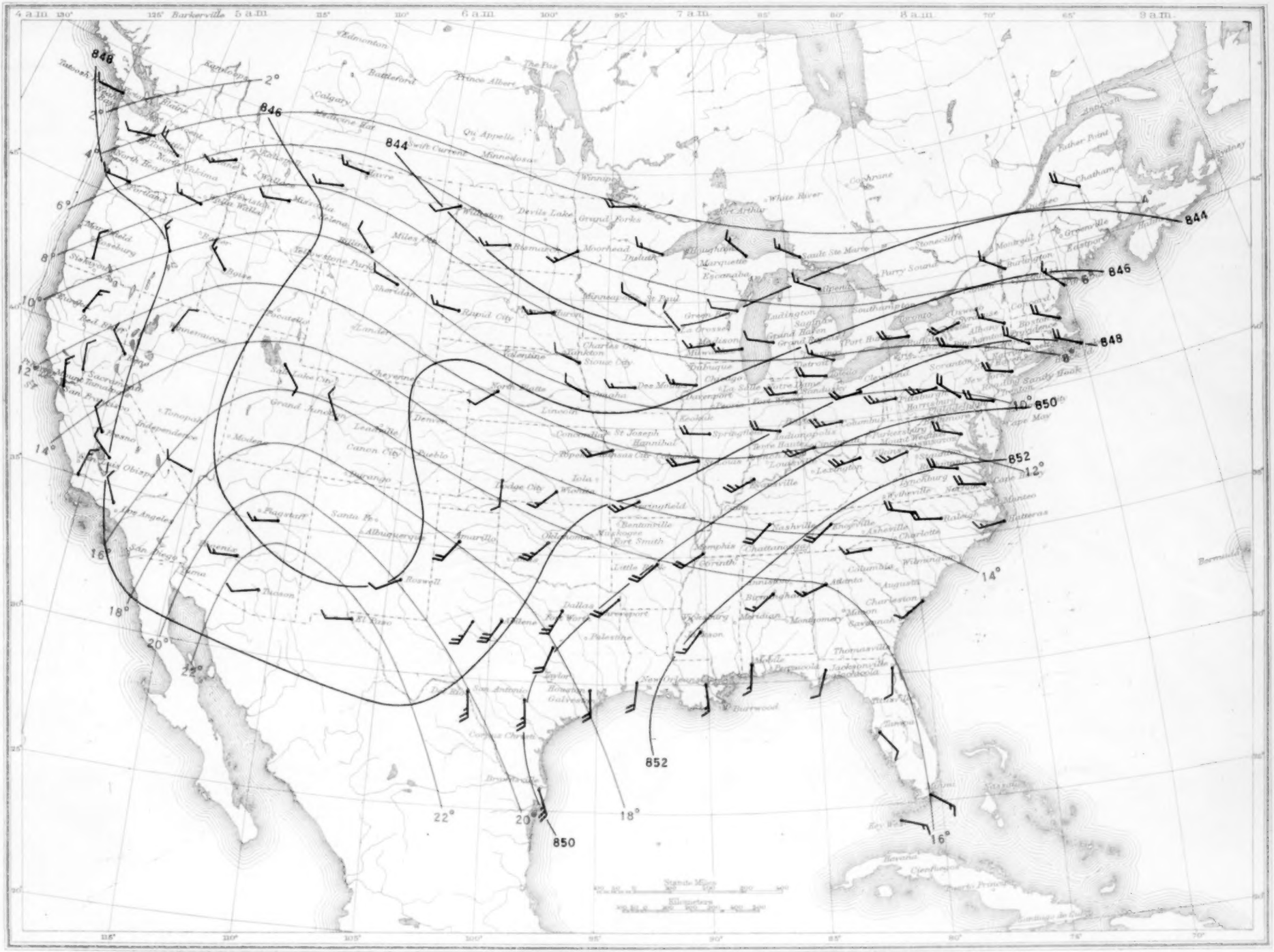


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) May 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

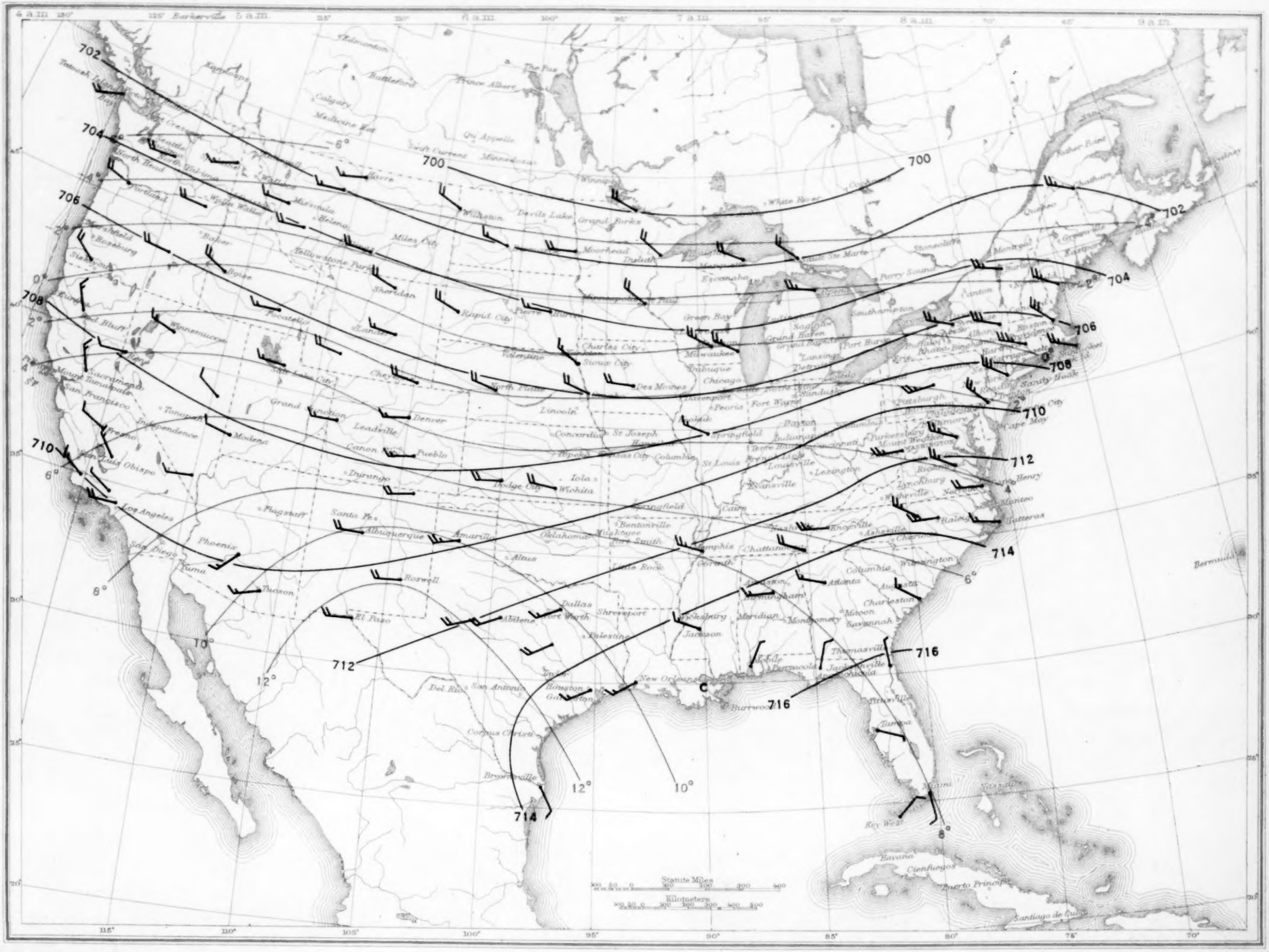
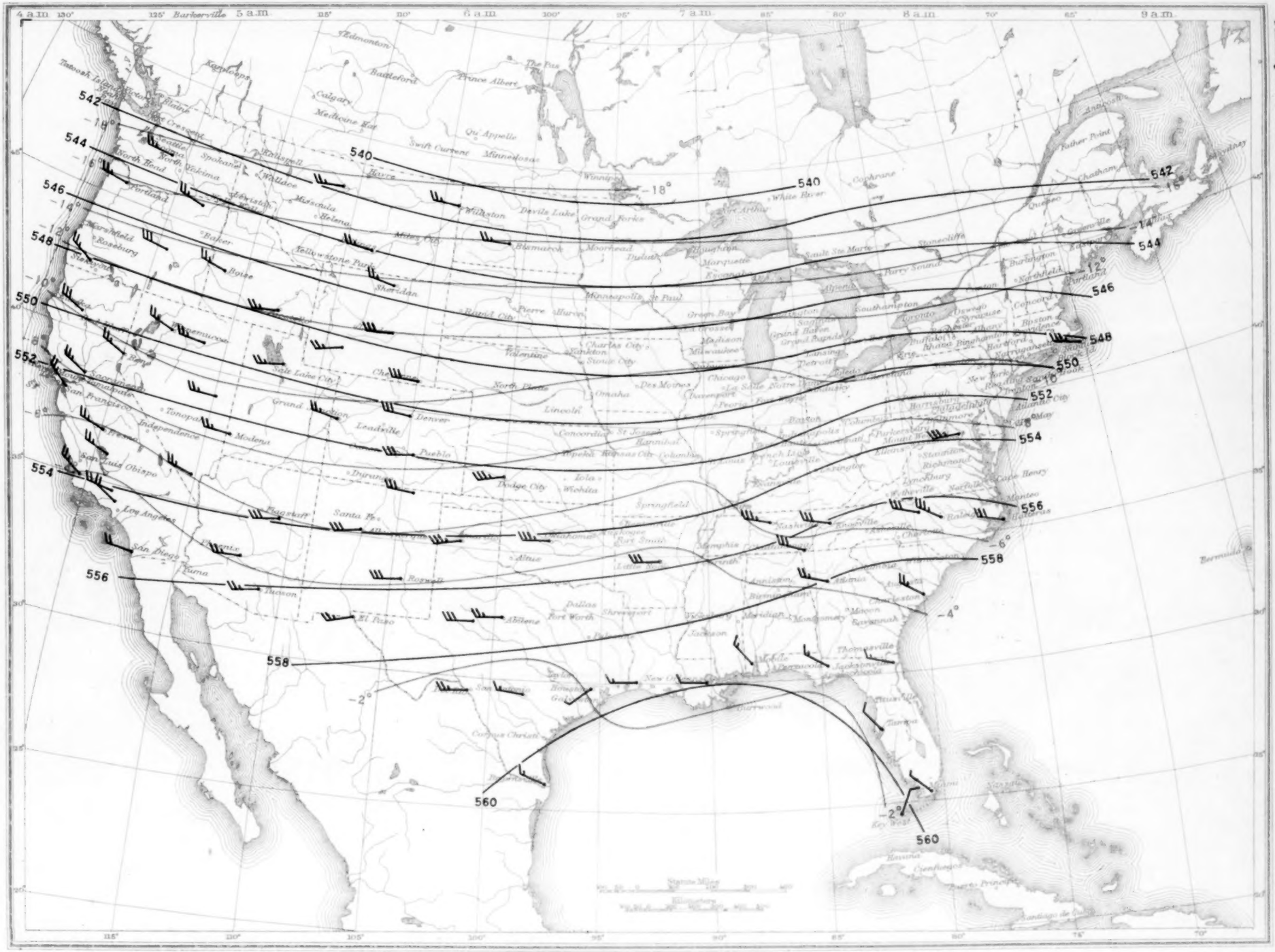


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) May 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) May 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).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Calgary
Medicine Hat
Kamloops
Prince Albert
The Pas
Qu'Appelle
Swift Current
Minnedosa
Winnipeg
Cochrane
White River
Father Point
Chatham
Quebec
Sydney
Wallace
Missoula
Helena
Miles City
Havre
Williston
Devils Lake
Grand Forks
Bismarck
Moorhead
Duluth
Billings
Marquette
Sault Ste Marie
Stonecliffe
Parry Sound
Baker
Boise
Yellowstone Park
Sheridan
Pierre
Rapid City
Minneapolis
St Paul
Green Bay
Toronto
Oswego
Syracuse
Concord
Boston
Albany
Portland
Northfield
Roseburg
Medford
Klamath Falls
Bend
Redmond
Chemurgo
Reno
Salt Lake City
Charles City
Yankton
Sioux City
Valentine
Chicago
La Salle
Peoria
Rochester
Buffalo
Grand Rapids
Lansing
Detroit
Toledo
Erie
Hartford
Providence
Springfield
Worcester
Omaha
Des Moines
Davenport
Lincoln
Grand Island
Denver
Leadville
Concordia
St Joseph
Hannibal
Springfield
New York
Philadelphia
Baltimore
Washington
Atlantic City
Harrisburg
Pittsburgh
Wilmington
Trenton
Independence
Modena
Tonopah
Pueblo
Topeka
Kansas City
Columbia
Louisville
Richmond
Staunton
Lynchburg
Norfolk
Cape Henry
Hatteras
Monteo
Bermuda
Santa Fe
Flagstaff
Dodge City
Wichita
Springfield
Nashville
Knoxville
Charlotte
Memphis
Little Rock
Fort Smith
Atlanta
Montgomery
Macon
Savannah
Charleston
Jacksonville
Thomasville
Tampa
Key West
Dallas
Fort Worth
Abilene
Shreveport
Meridian
Jackson
Monroe
Natchez
Vicksburg
Corpus Christi
Galveston
Houston
Port Arthur
New Orleans
Mobile
Pensacola
Tallahassee
Apalachicola
Cedar Keys
Jacksonville
Miami
Nassau
Havana
Santiago de Cuba
Kingston
Caracas
Curaçao
Maracaibo
Panama
Guantanamo
Haiti
Puerto Principe
Jamaica
Cienfuegos
Isla de Pinos
Swan Islands
Tuxpan
Tampico
Vera Cruz
Progreso
Campeche
Merida
Belize
Coatzacoalcos
Salina Cruz
Acapulco
Mexico City
Guadalajara
Mazatlan
Manzanillo
Guaymas
Hermosillo
Nogales
Tucson
Yuma
Phoenix
Prescott
Needles
Los Angeles
San Diego
Santa Barbara
San Luis Obispo
San Francisco
Sacramento
Red Bluff
Eureka
Tatoosh Island
Seattle
Spokane
Yakima
Walla Walla
Pullman
Kalispell
Lewiston
Wenatchee
North Head
Astoria
Portland
Eugene

Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) May 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

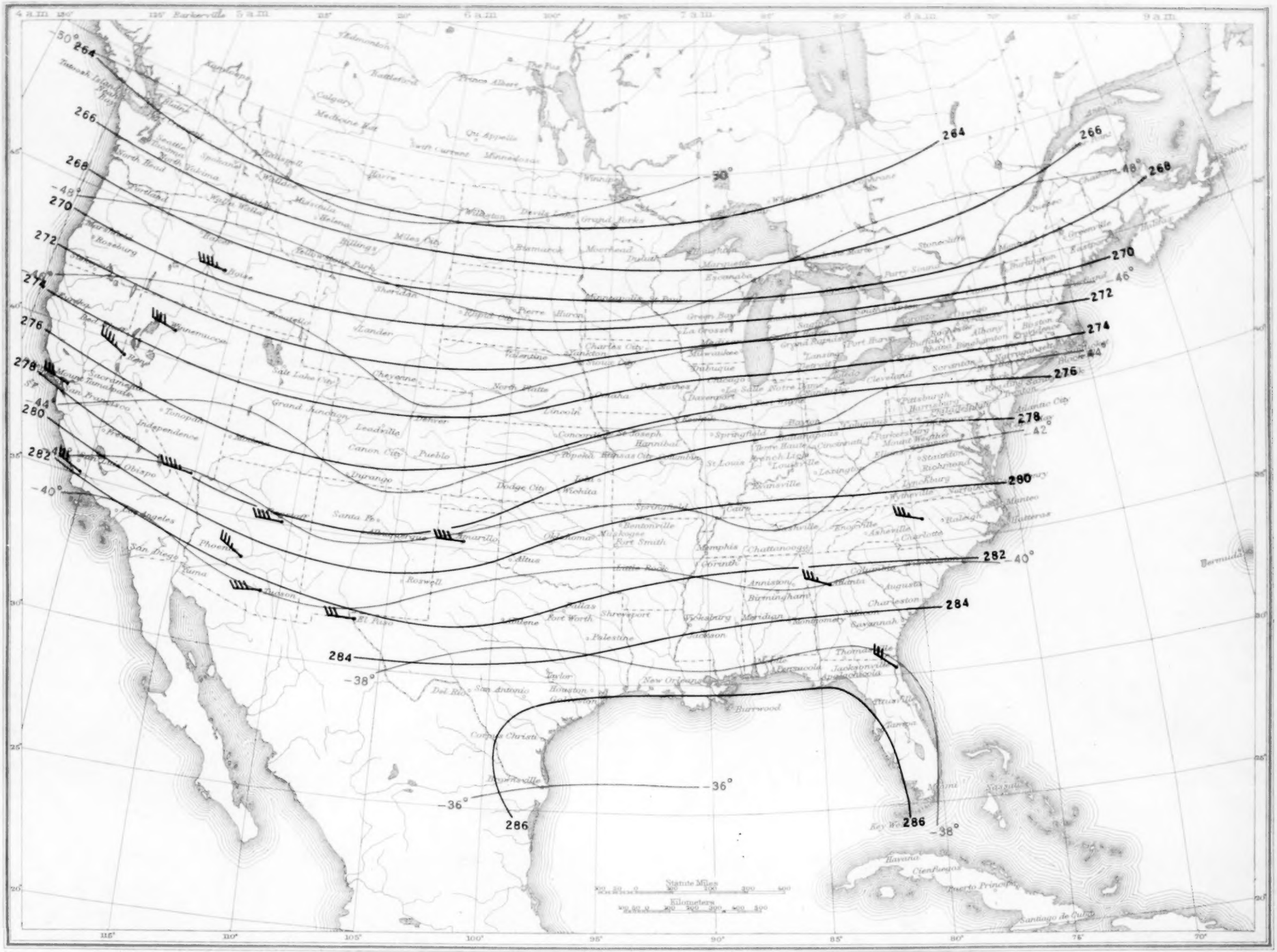


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) June 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) June 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

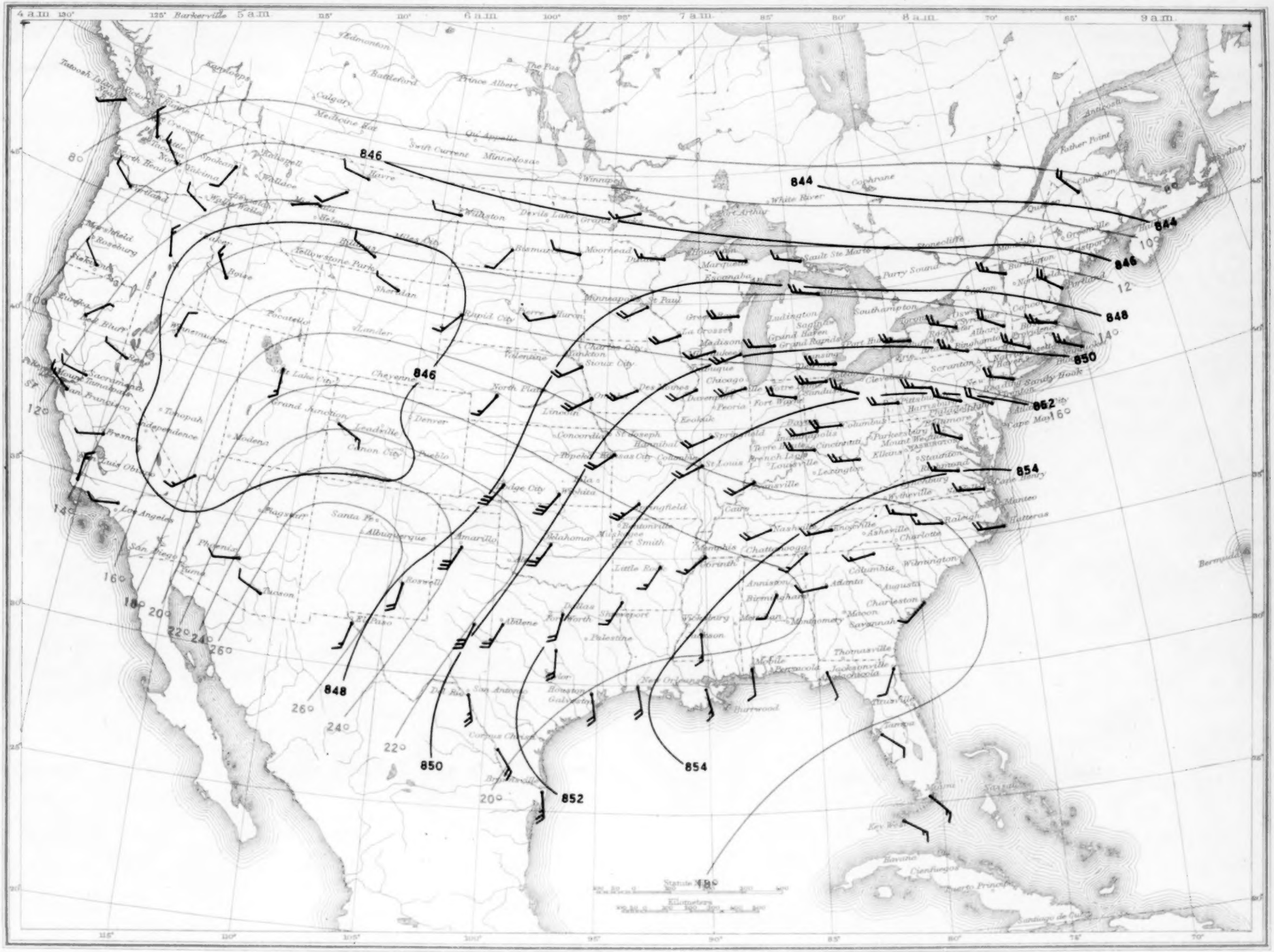


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) June 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

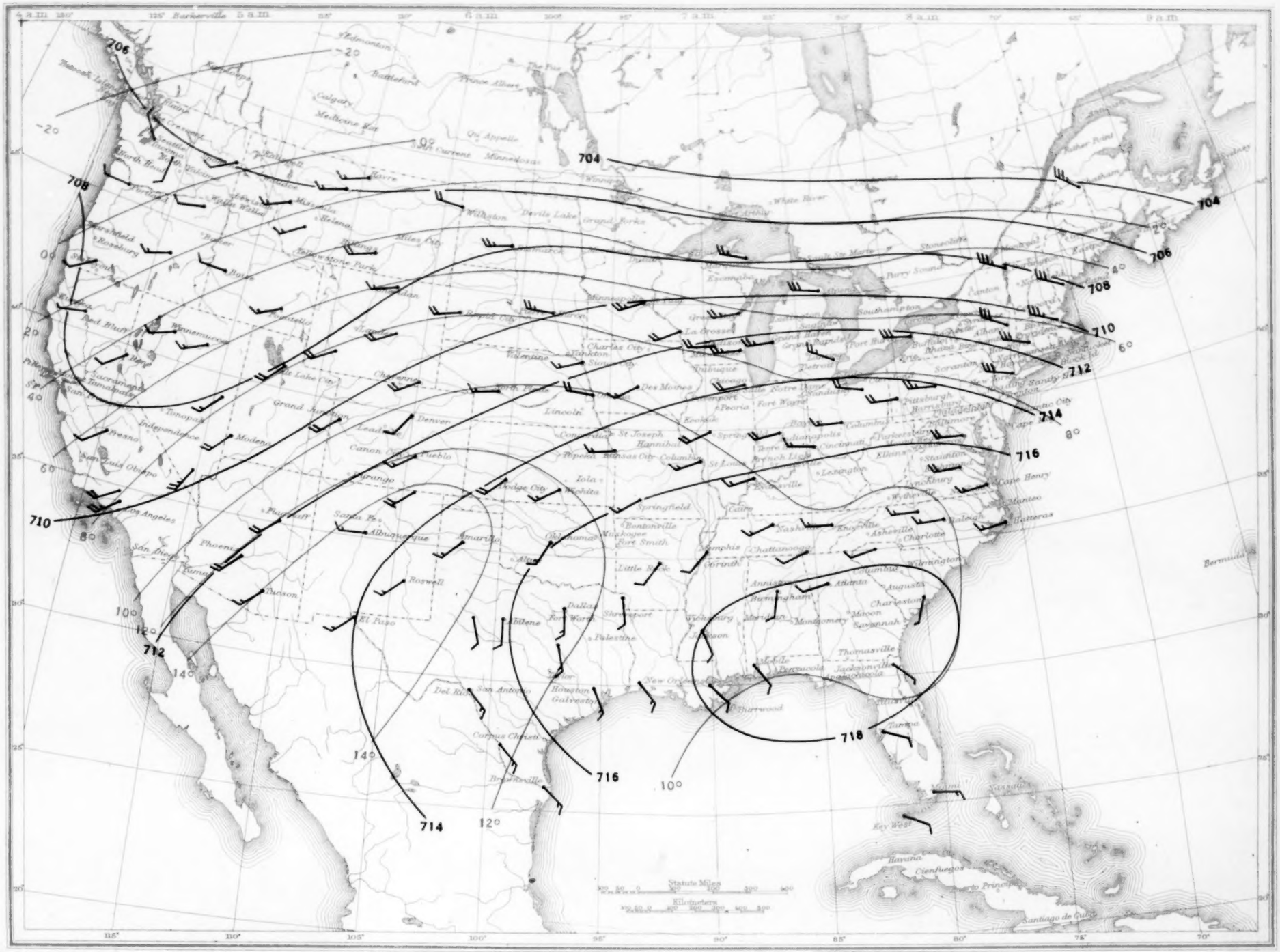


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) June 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) June 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

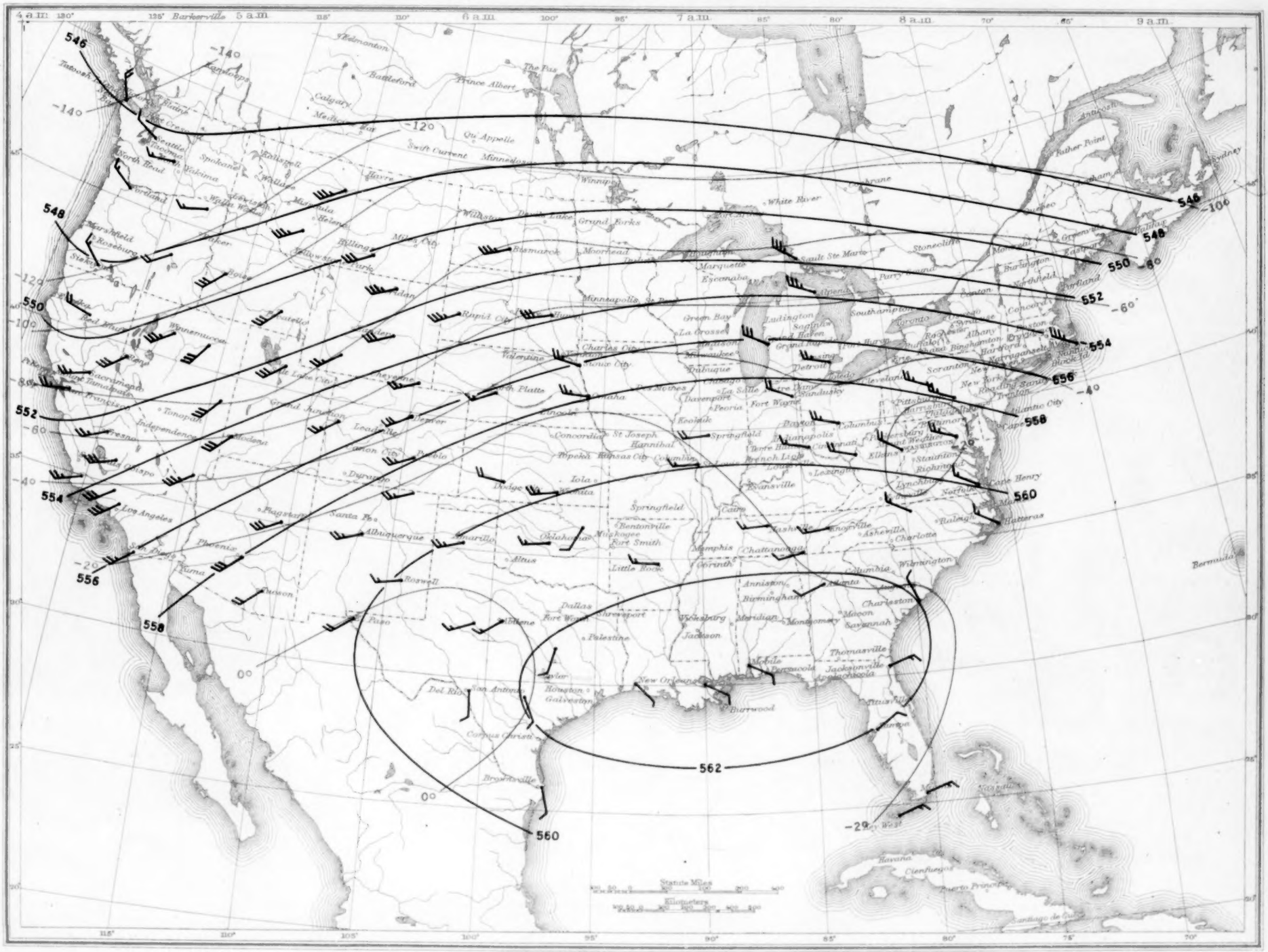


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) June 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

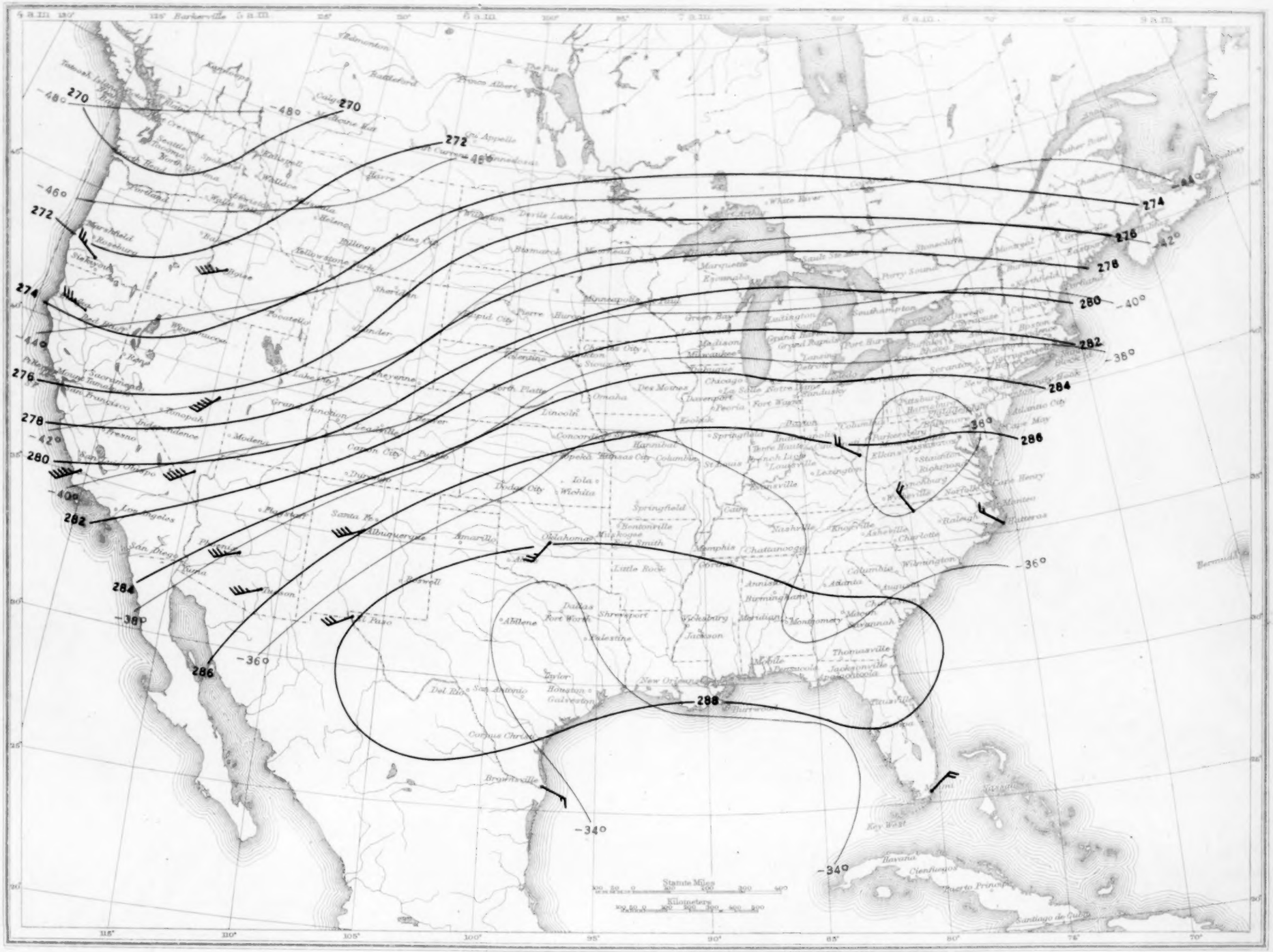
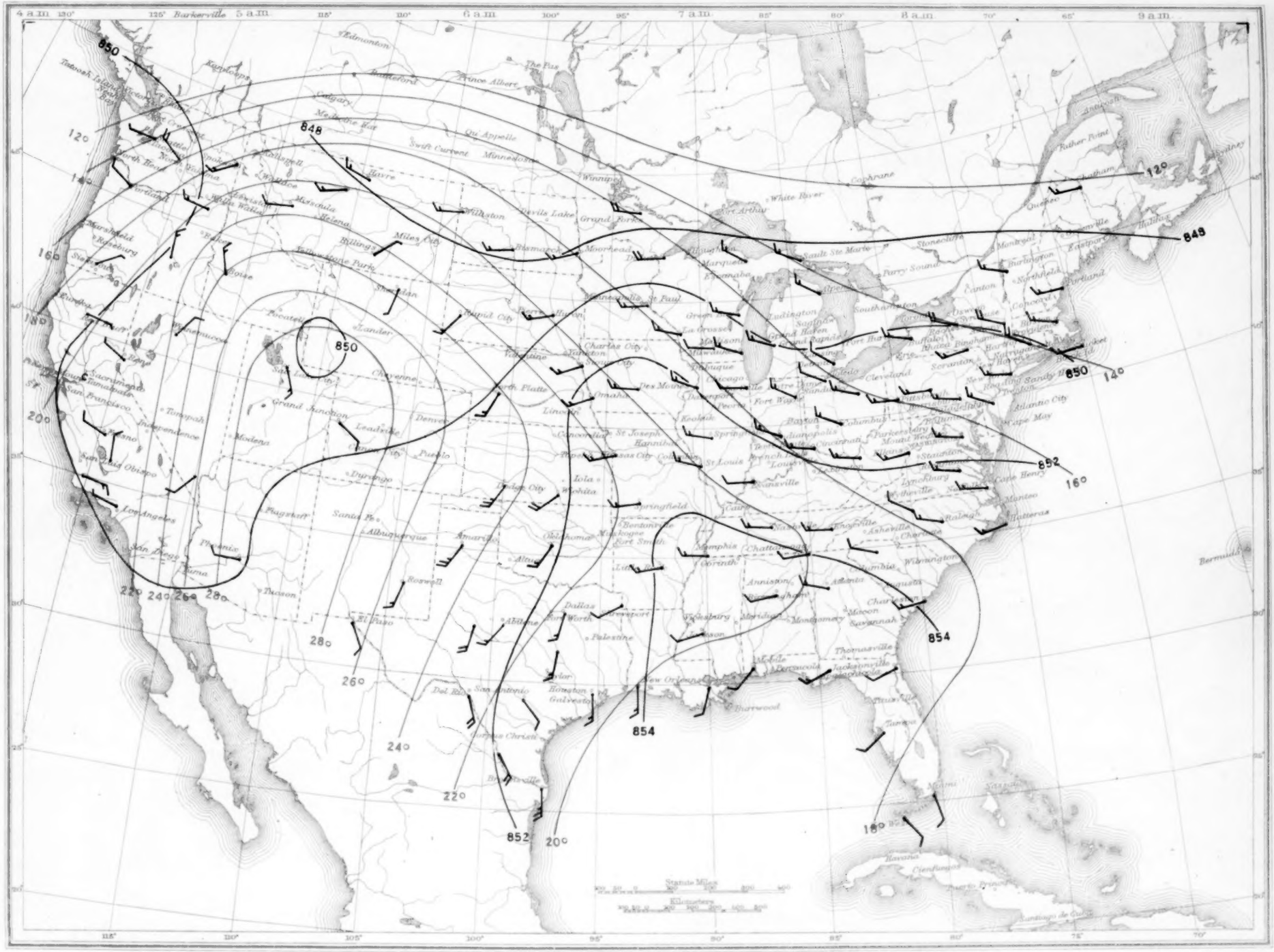


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) July 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) July 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).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Prince Albert
The Pas
Calgary
Medicine Hat
Qu'Appelle
Swift Current
Minnedosa
Winnipeg
Cochrane
White River
Fort Arthur
Quebec
Father Point
Chatham
Gaspe
Havre
Devils Lake
Grand Forks
Wilston
Bismarck
Moorhead
Sault Ste Marie
Stonecliffe
Montreal
Portland
Miles City
Billings
Helena
Missoula
Yellowstone Park
Boise
Pocatello
Rapid City
Minneapolis
St Paul
Parry Sound
Northfield
Concord
Charlas City
Yankton
Valentine
Green Bay
La Crosse
Saginaw
Toledo
Cleveland
Erie
Scranton
Atlantic City
Cape May
Omaha
Des Moines
Chicago
Fort Wayne
Lincoln
Denver
Cheyenne
Grand Junction
Leadville
Pueblo
Colorado Sp.
Dodge City
Concordia
St Joseph
Hannibal
St Louis
Springfield
Columbia
Louisville
Lynchburg
Cape Henry
Monteo
Hatteras
Raleigh
Asheville
Charlotte
Memphis
Corinth
Wilmington
Bermuda
Flagstaff
Santa Fe
Albuquerque
Amarillo
Roswell
Tucson
Phoenix
Yuma
San Diego
Los Angeles
San Luis Obispo
San Francisco
Fresno
Independence
Tonopah
Sacramento
Modena
Dalhart
Abilene
Fort Worth
Dallas
Palestine
Waco
Austin
San Antonio
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Corpus Christi
Brownsville
El Paso
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Vicksburg
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Savannah
Atlanta
Augusta
Charleston
Jacksonville
Tampa
Miami
Nassau
Havana
Thomasville
Tallahassee
Apalachicola
Mobile
New Orleans
Galveston
Houston
Port Arthur
Lake Charles
Jackson
Vicksburg
Annisport
Birmingham
Chattanooga
Knoxville
Nashville
Evansville
Indianapolis
Terre Haute
Kokomo
Fort Wayne
Toledo
Detroit
Buffalo
Rochester
Syracuse
Albany
Utica
Binghamton
Harrisburg
Pittsburgh
Wheeling
Parkersburg
Charleston
Huntington
Ashland
Lexington
Cincinnati
Dayton
Columbus
Akron
Youngstown
Erie

Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) July 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

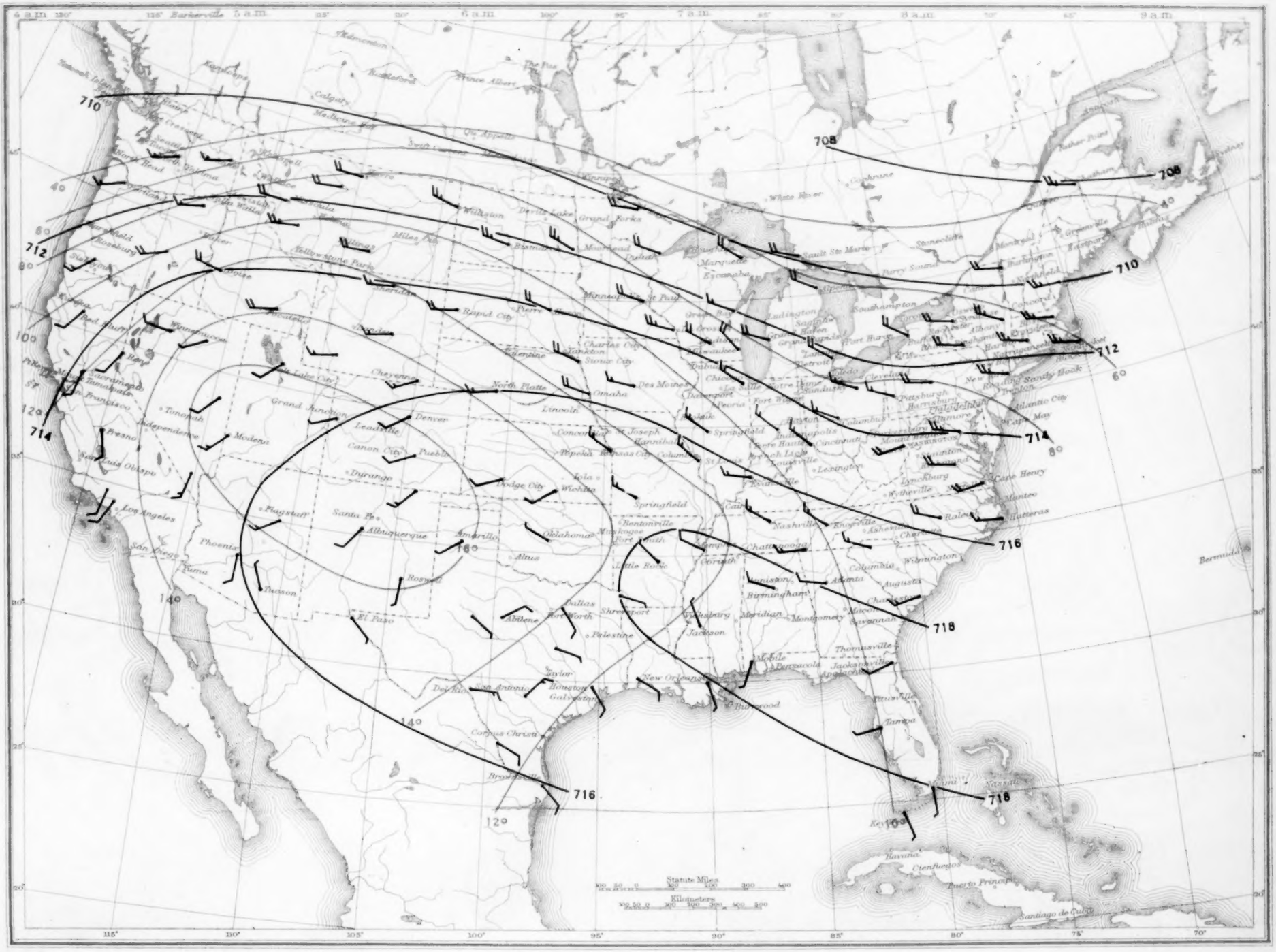


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) July 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) July 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

Chart XI. Isobars (mb), Isotherms (°C.) and Resultant Winds for 10,000 Meters (m. s. l.) July 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

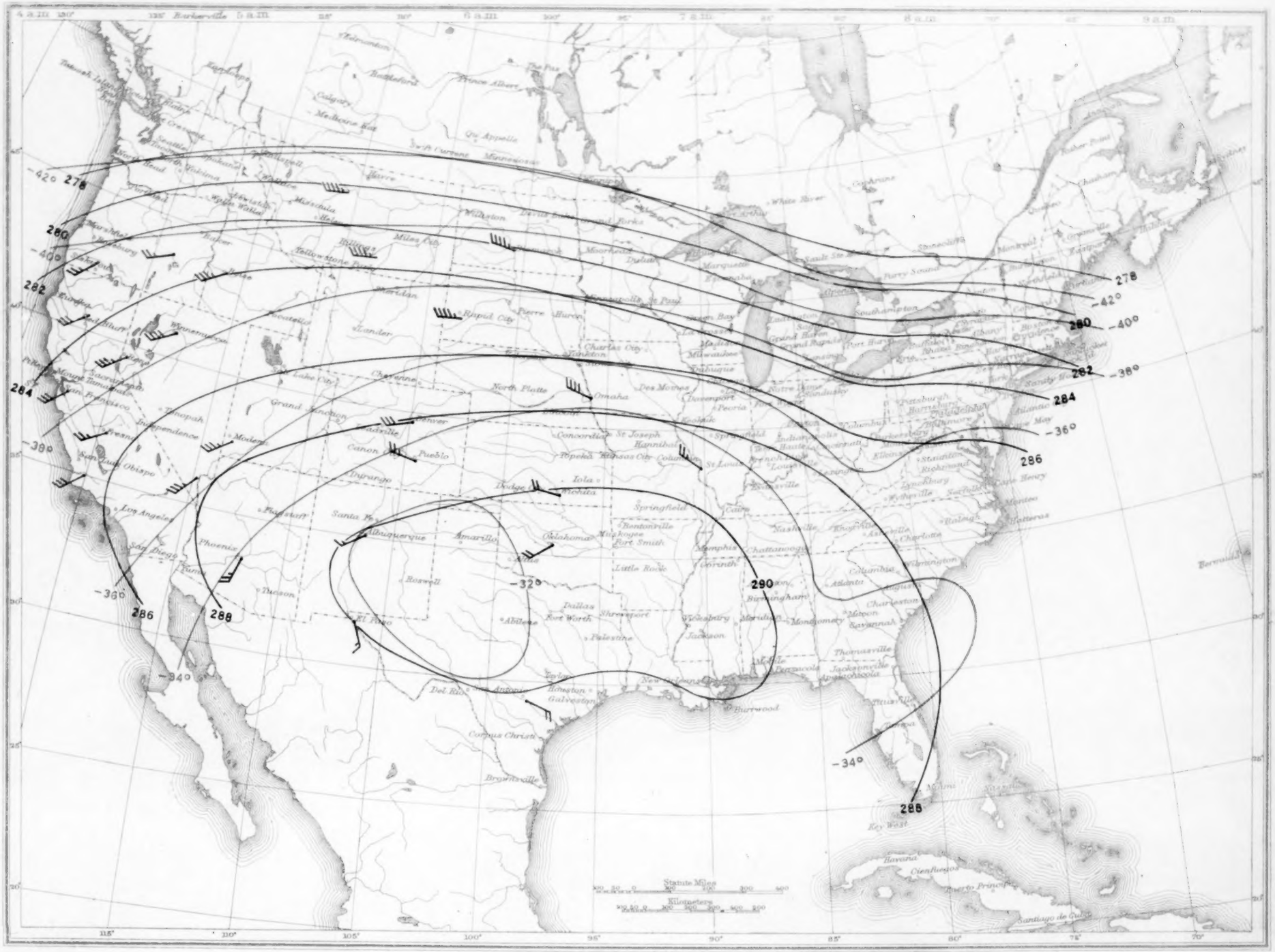


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) August 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) August 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

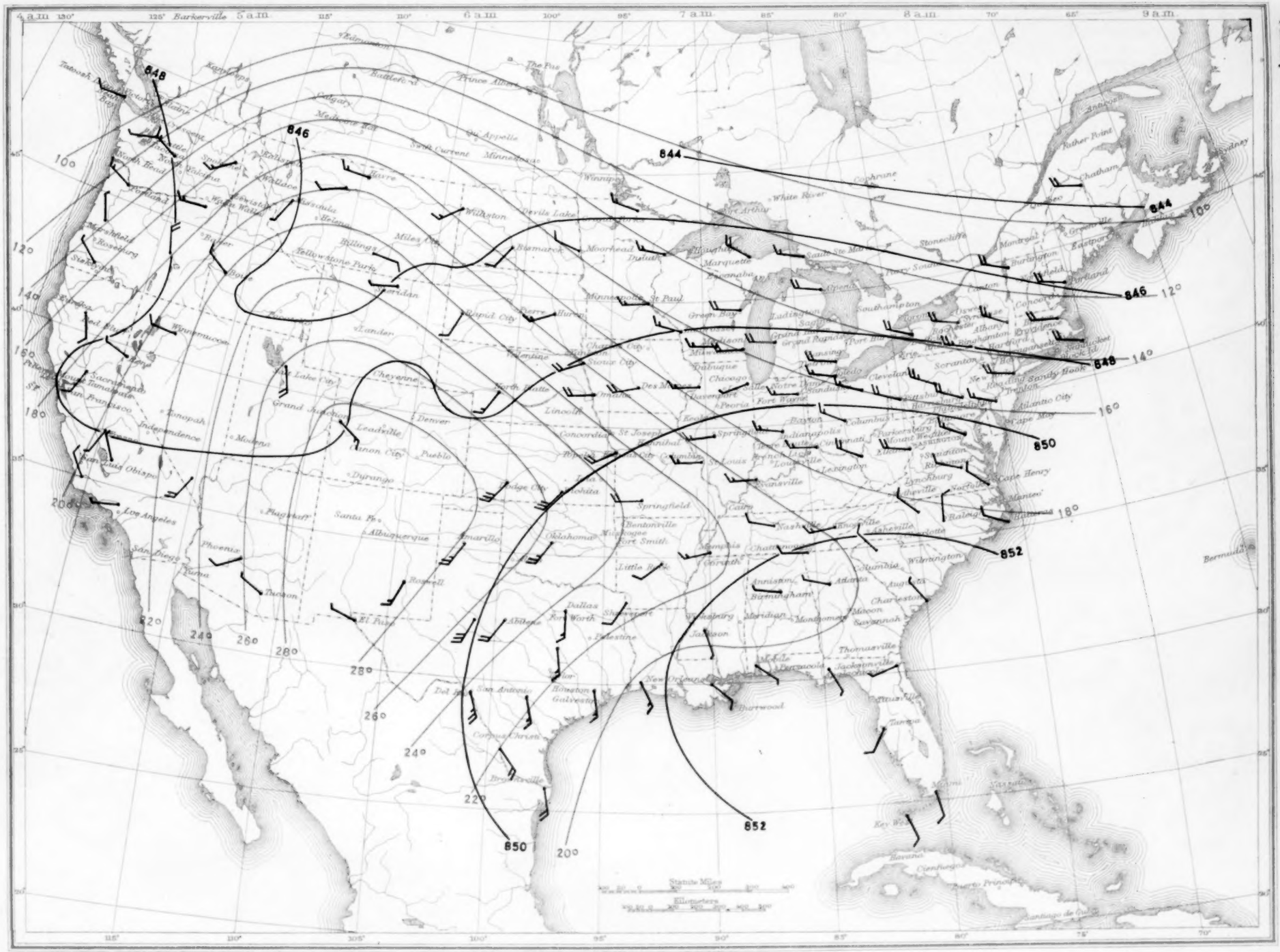


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) August 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

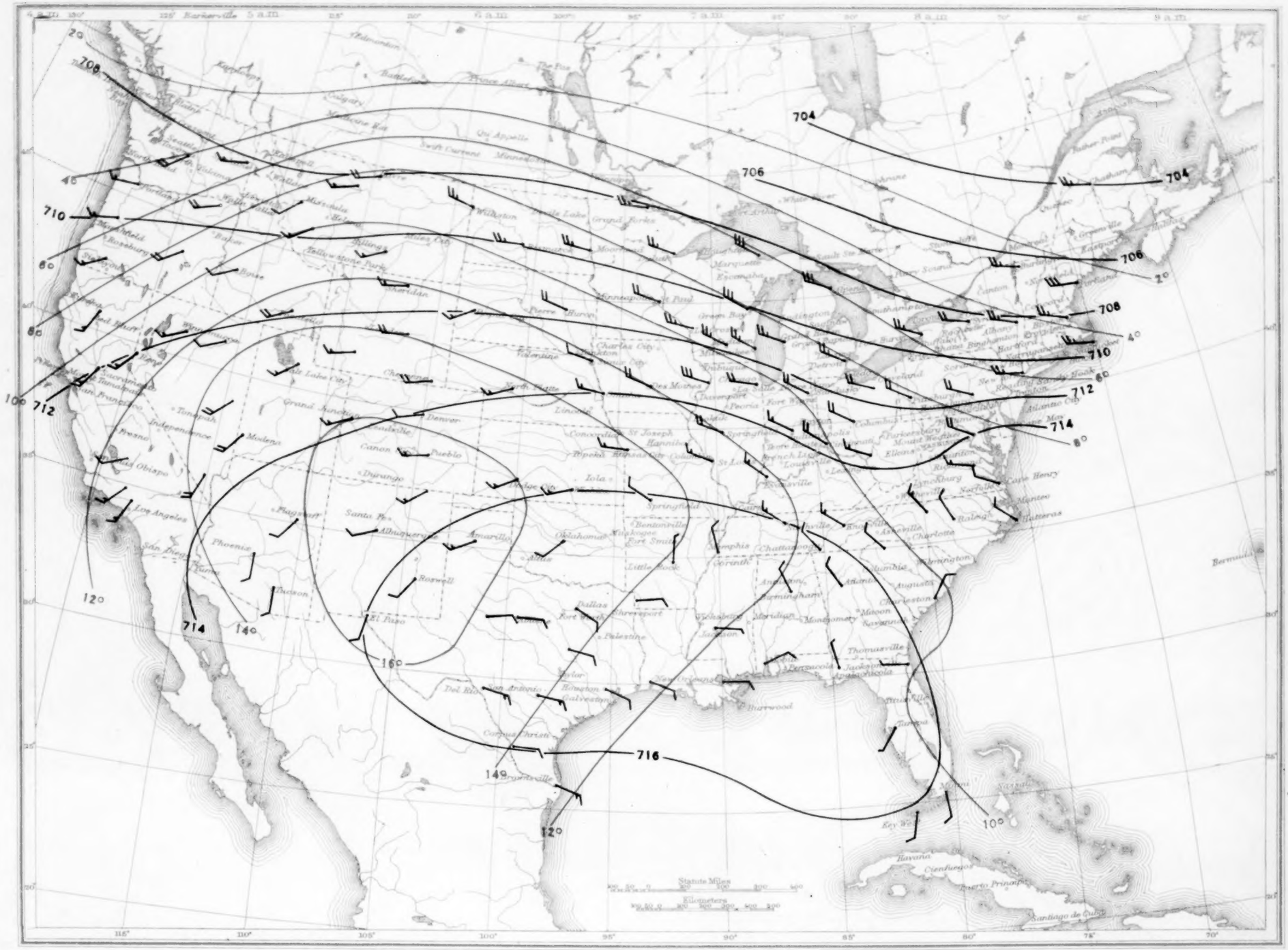


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) August 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) August 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

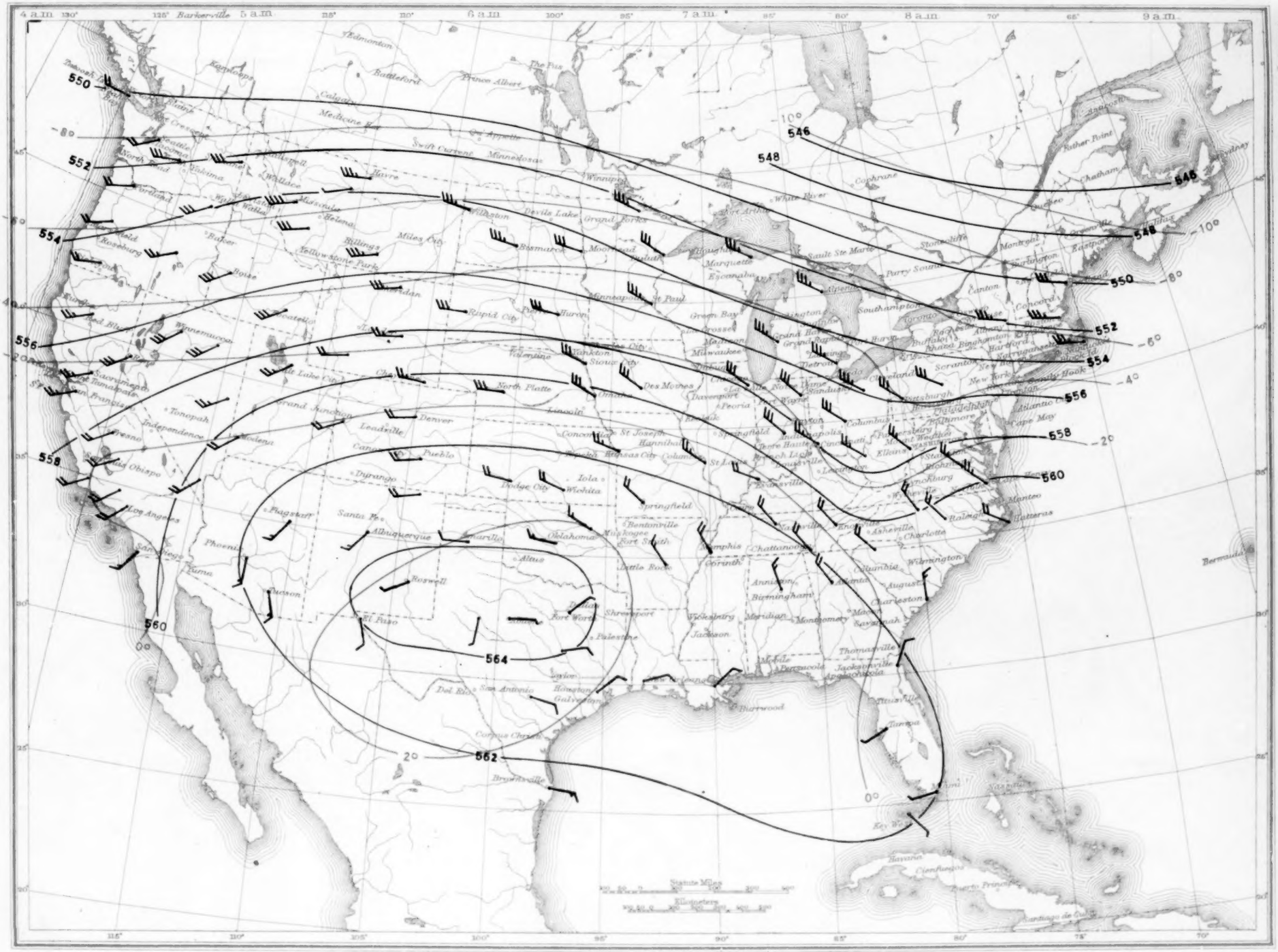


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) August 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

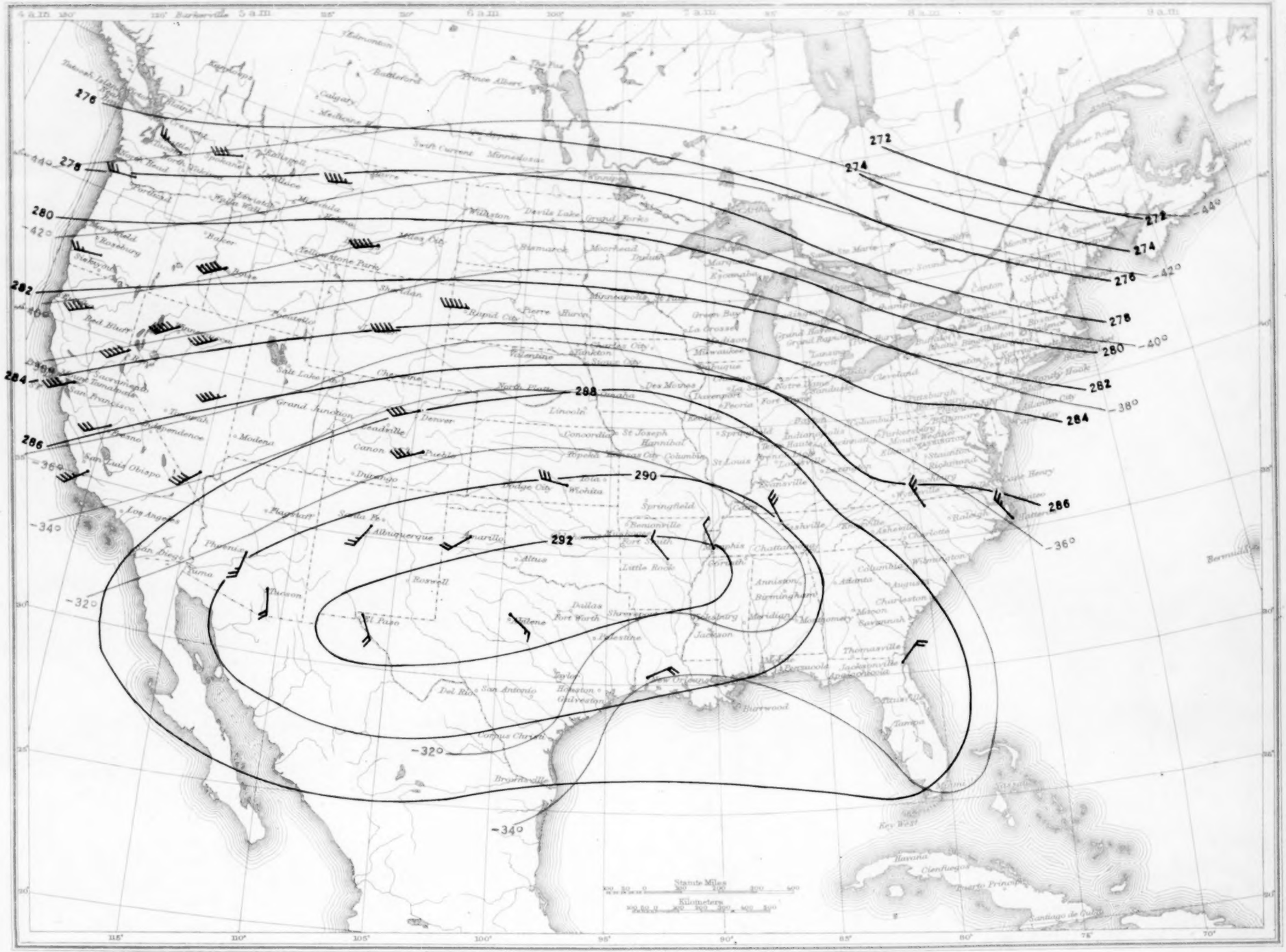


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) September 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) September 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

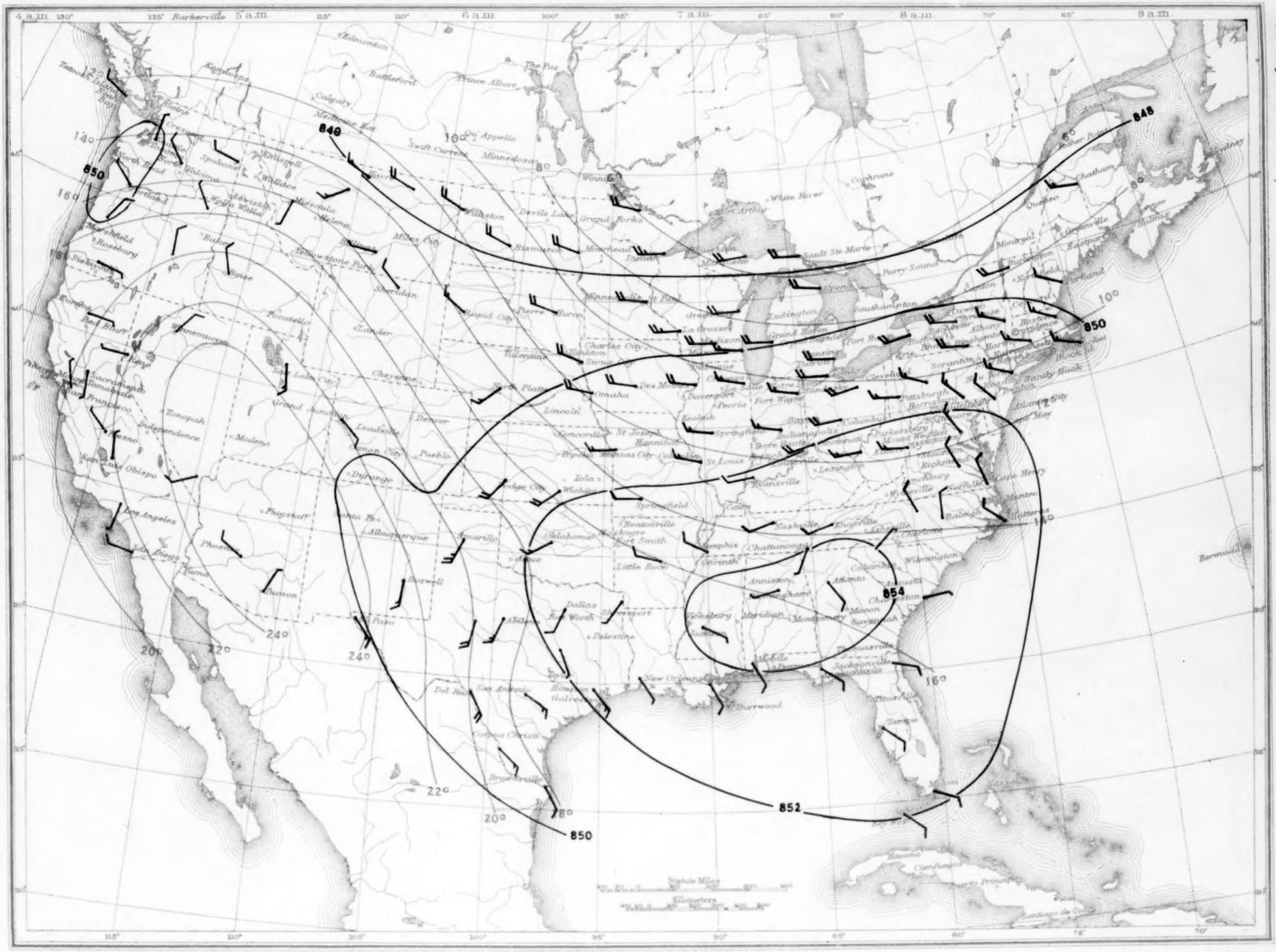


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) September 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) September 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) September 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.)

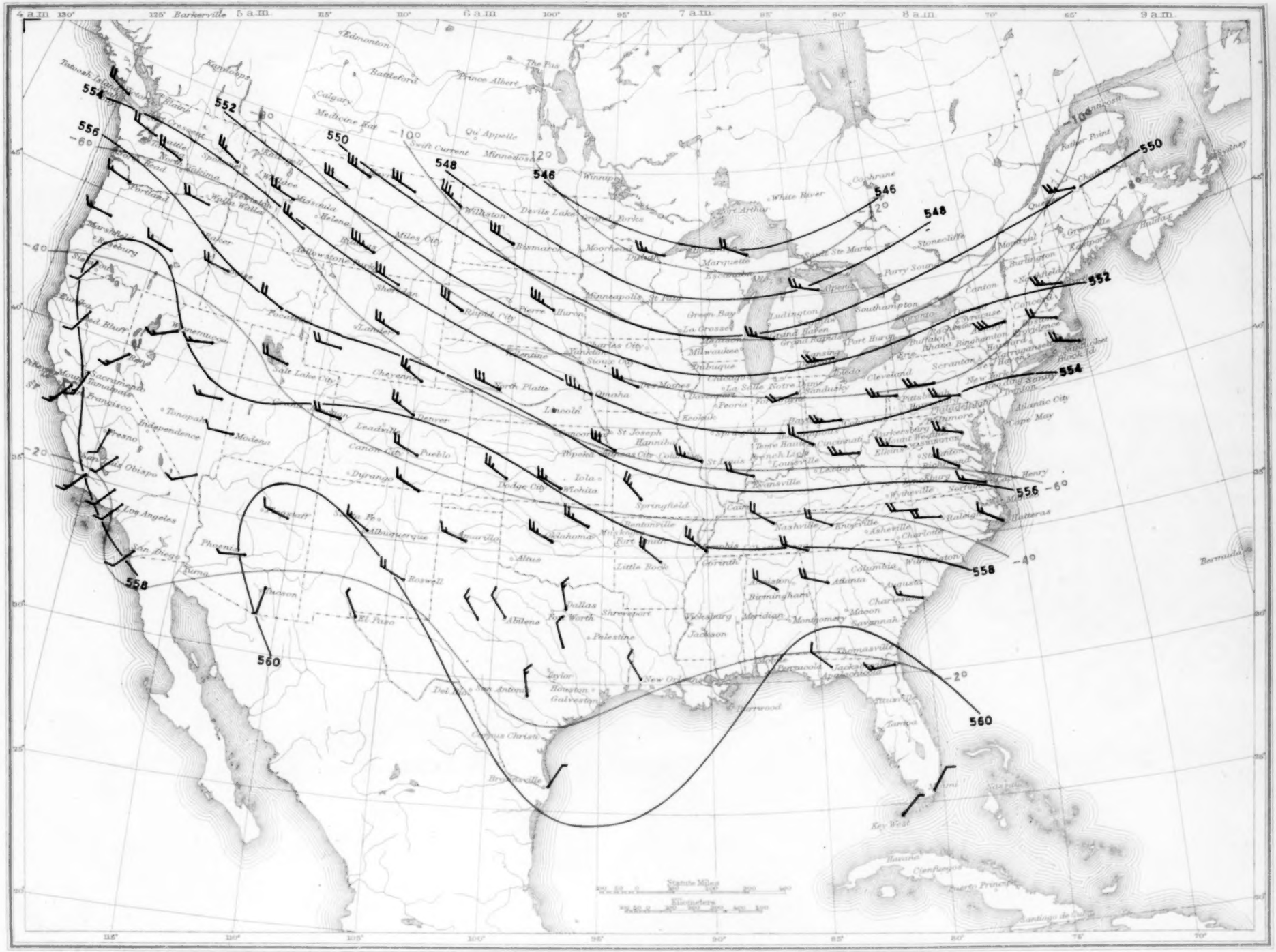


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) September 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

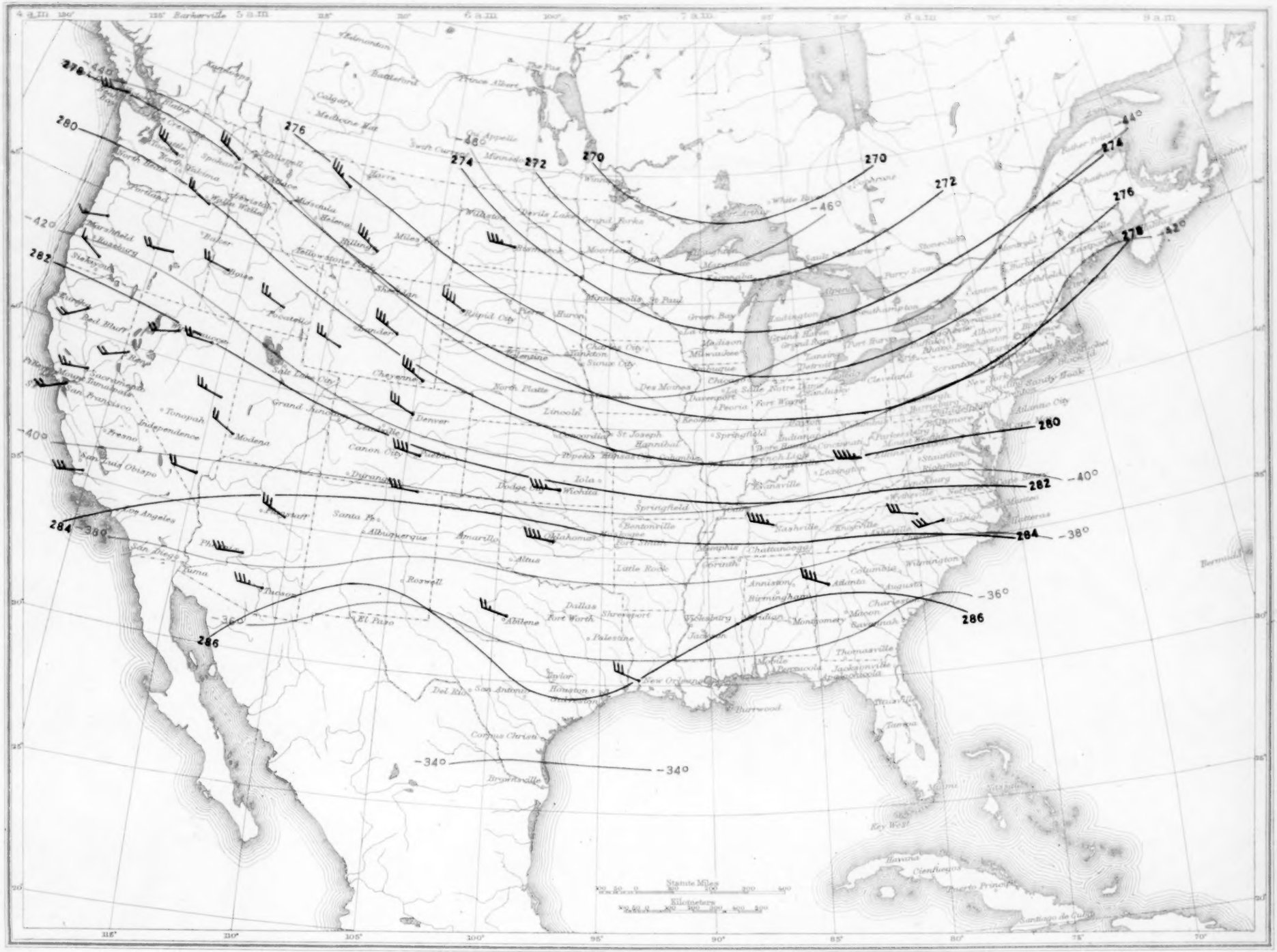


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) October 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) October 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

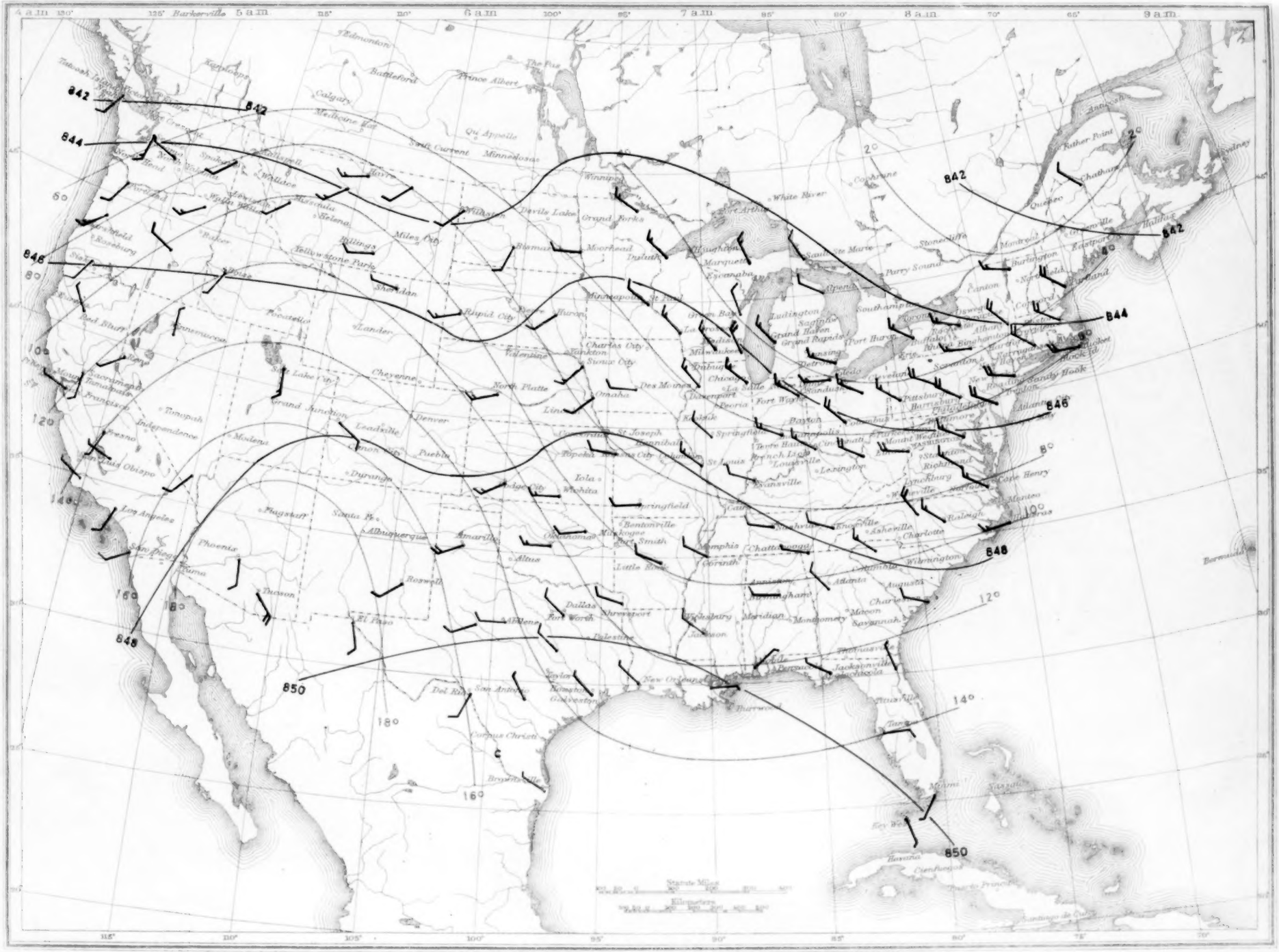


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) October 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

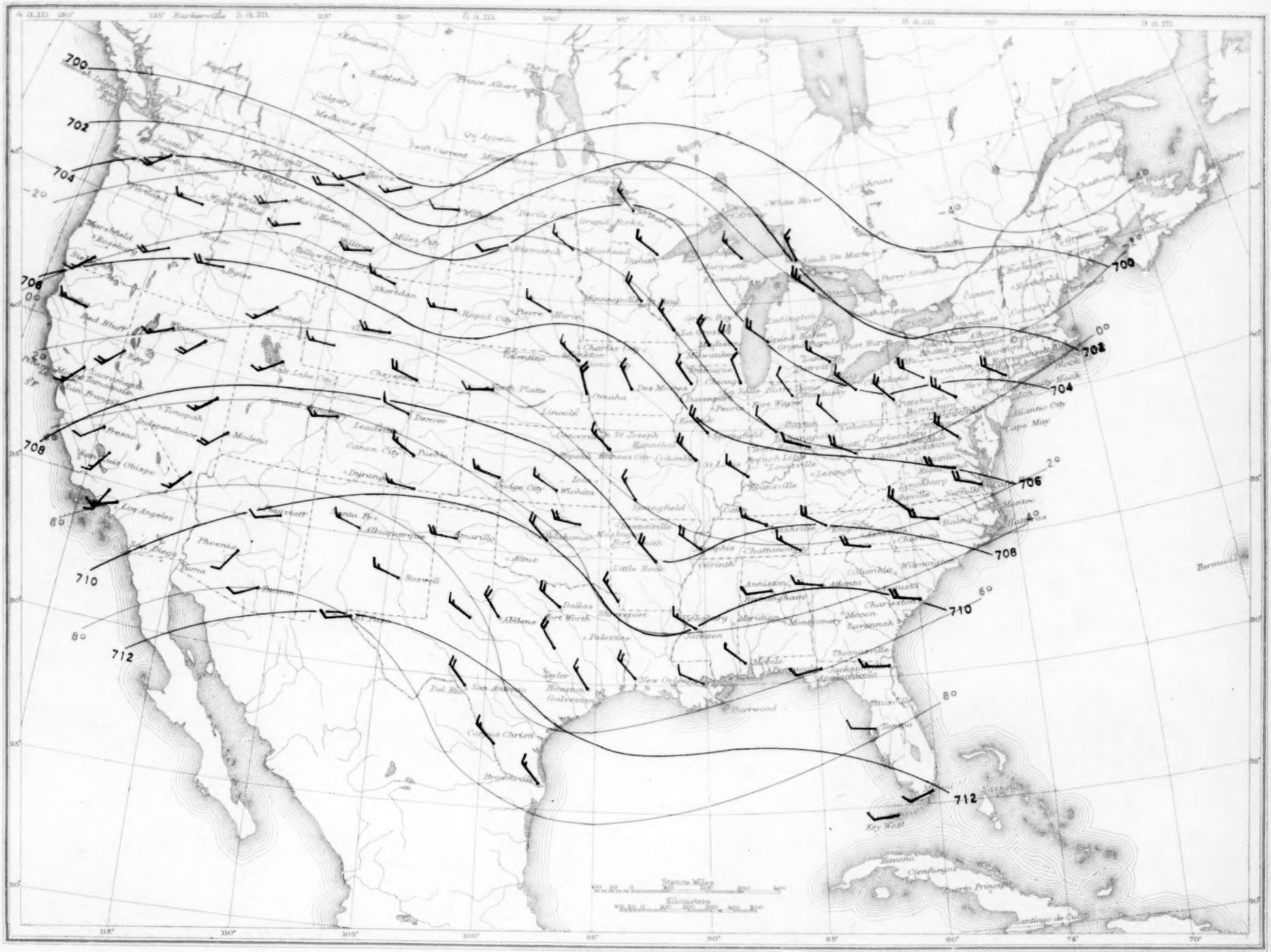


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) October 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) October 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

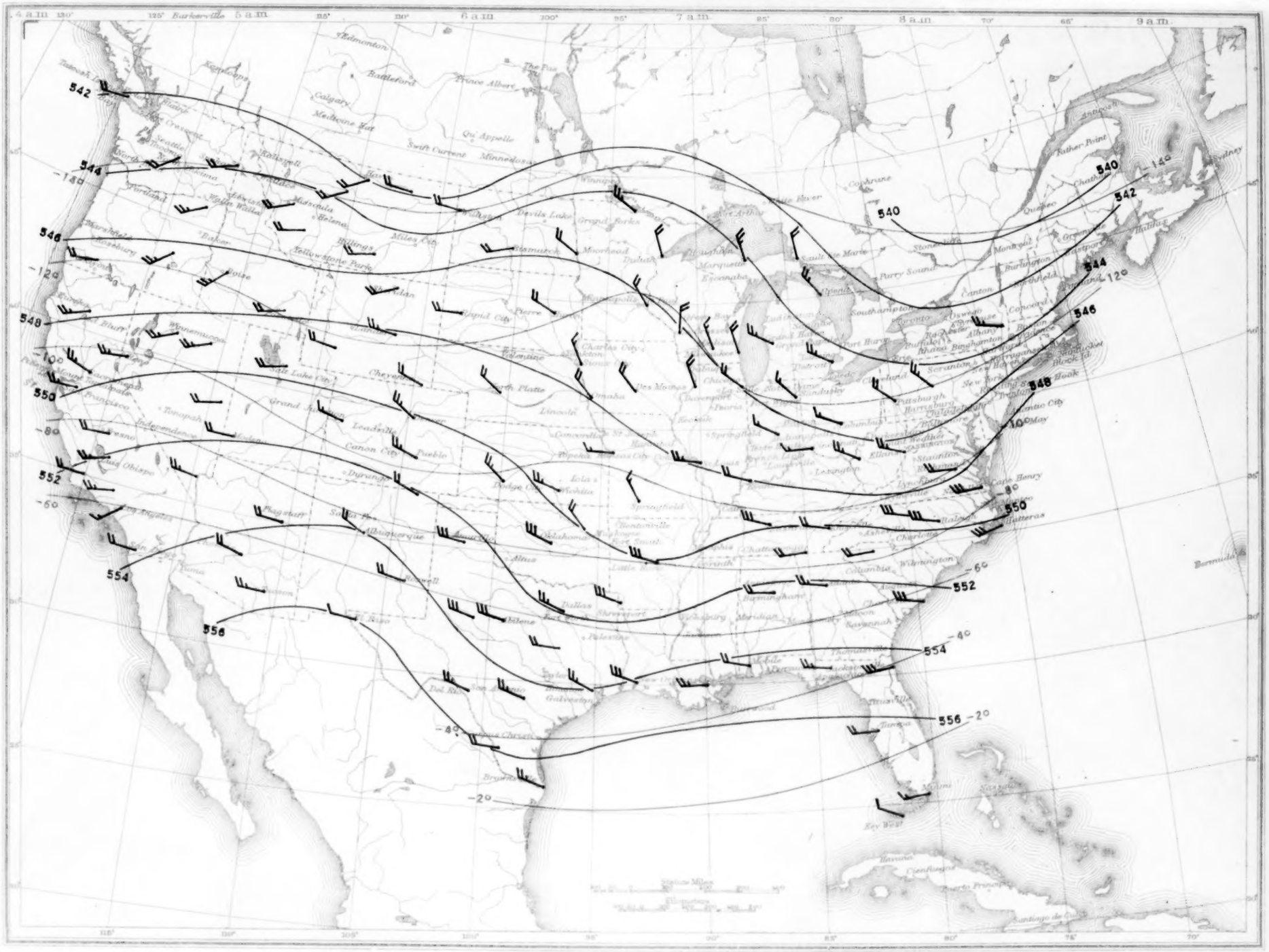


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) October 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

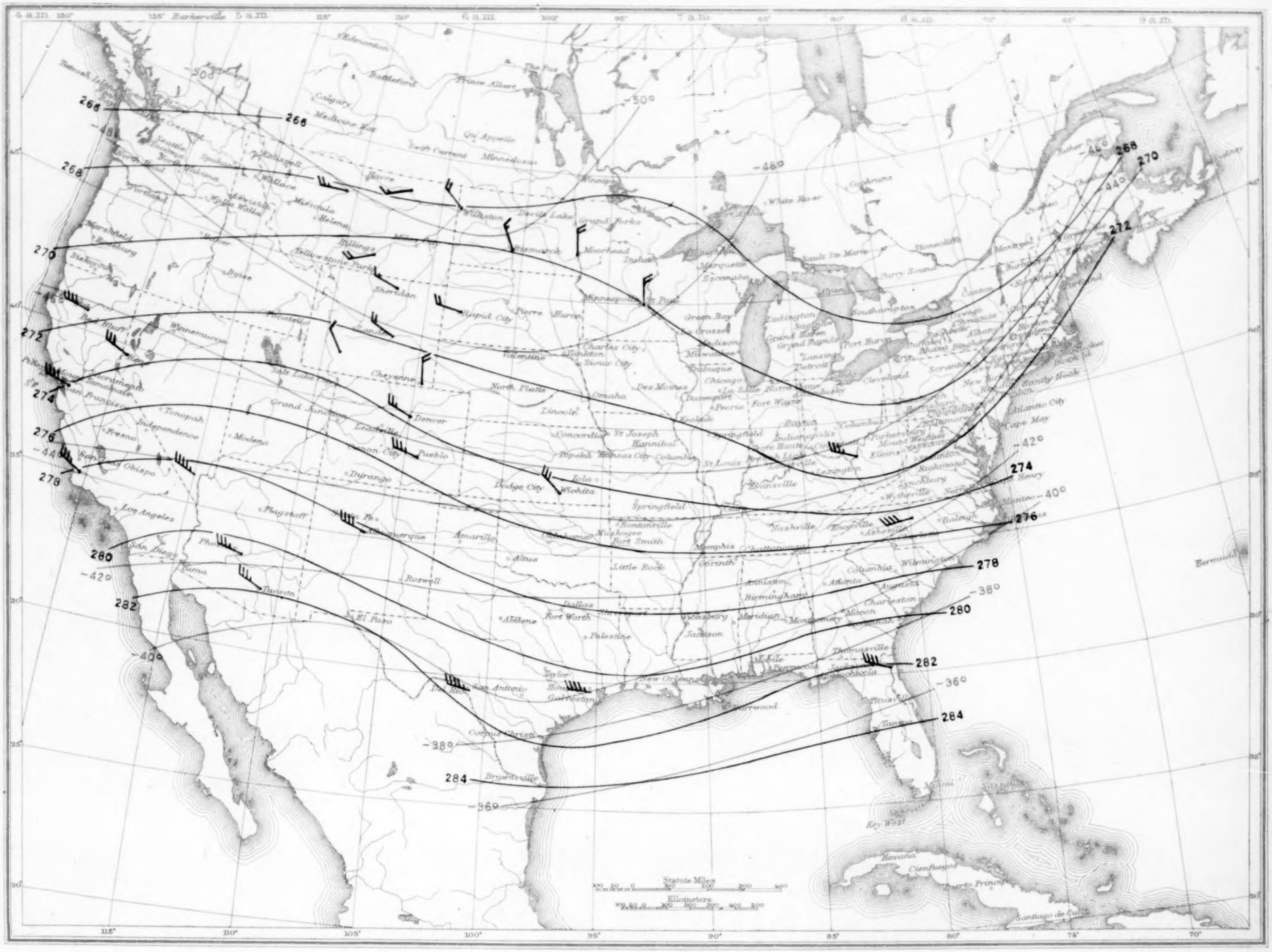


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) November 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) November 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

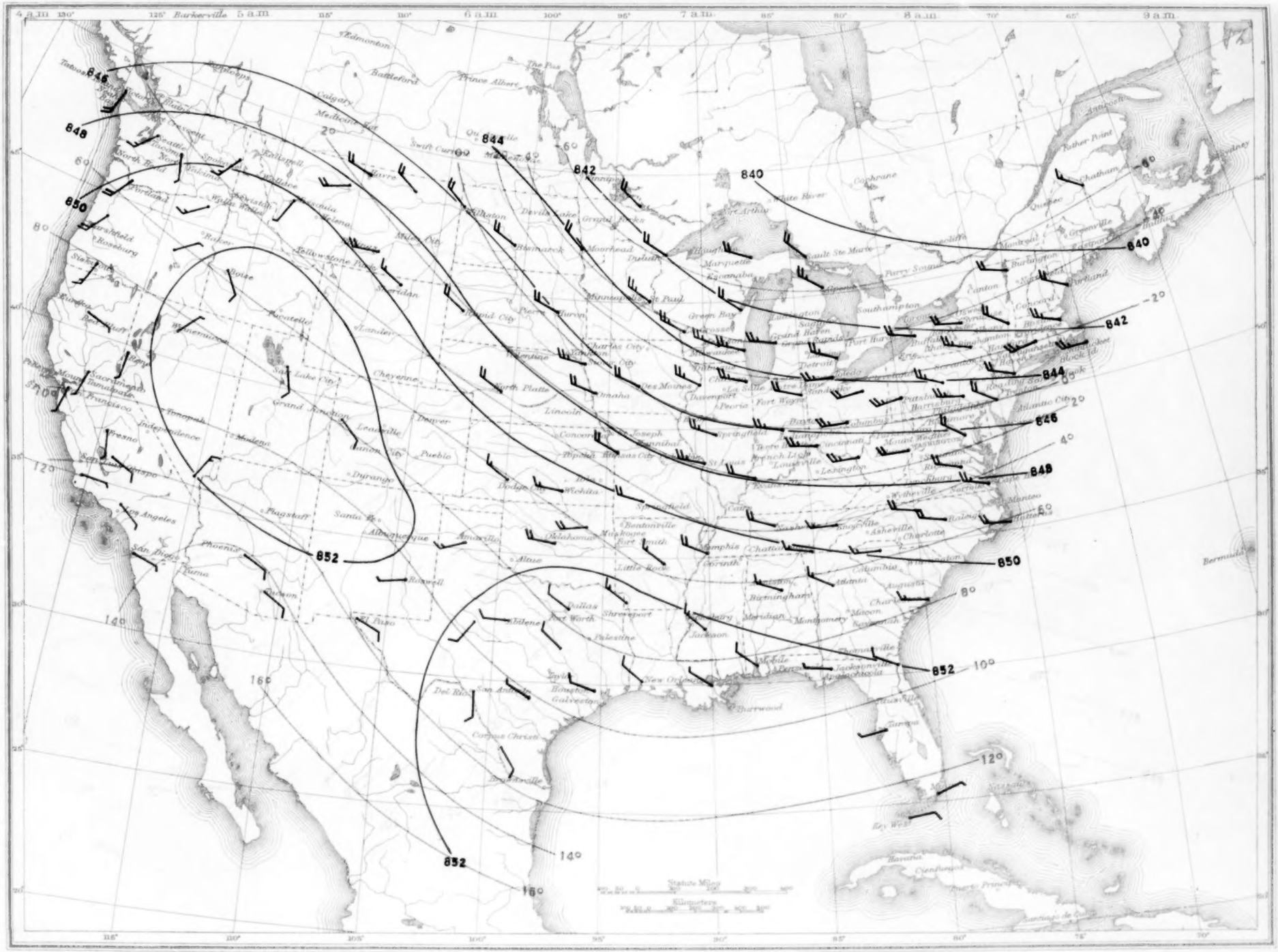


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) November 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

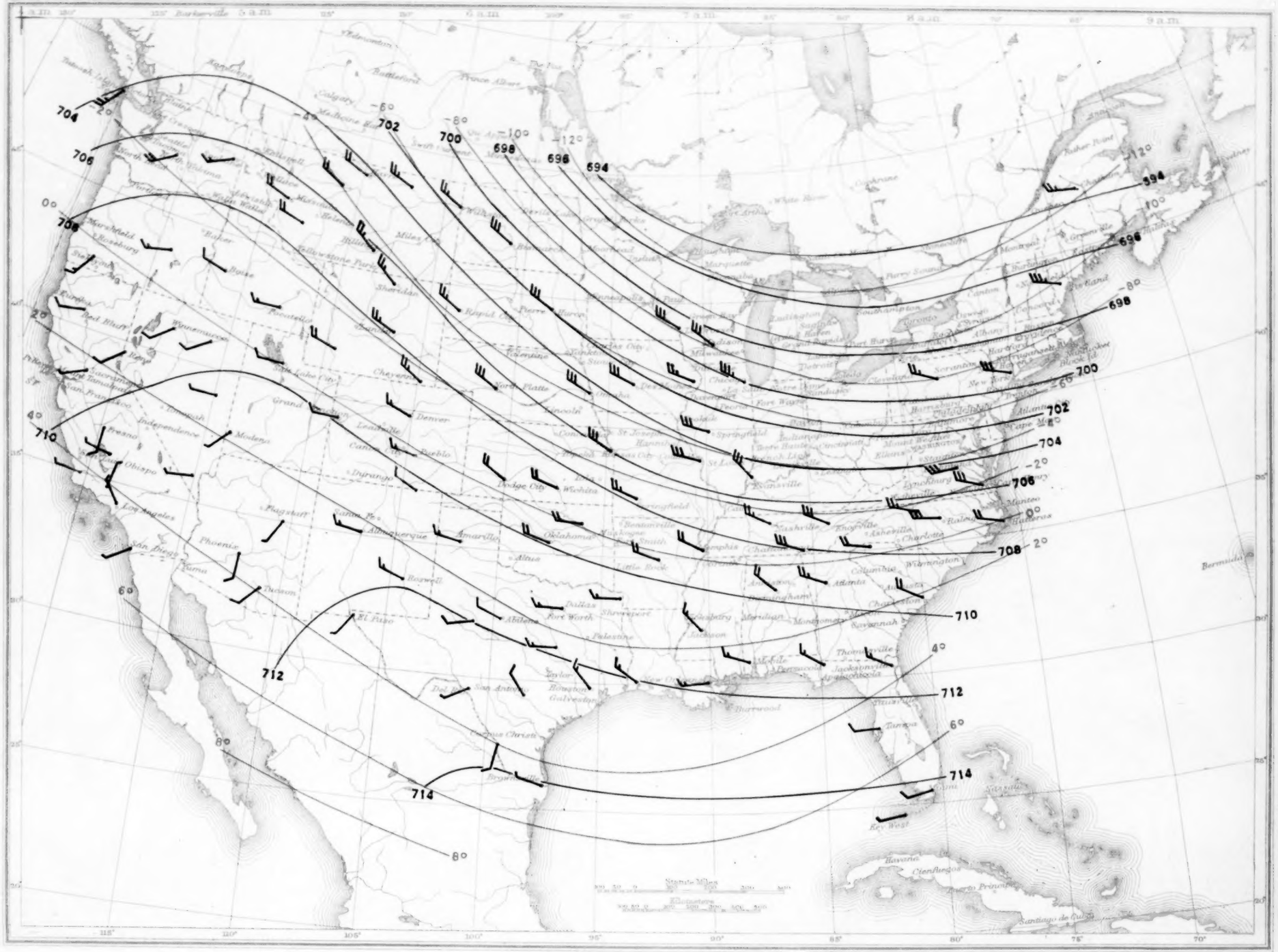


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) November 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) November 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

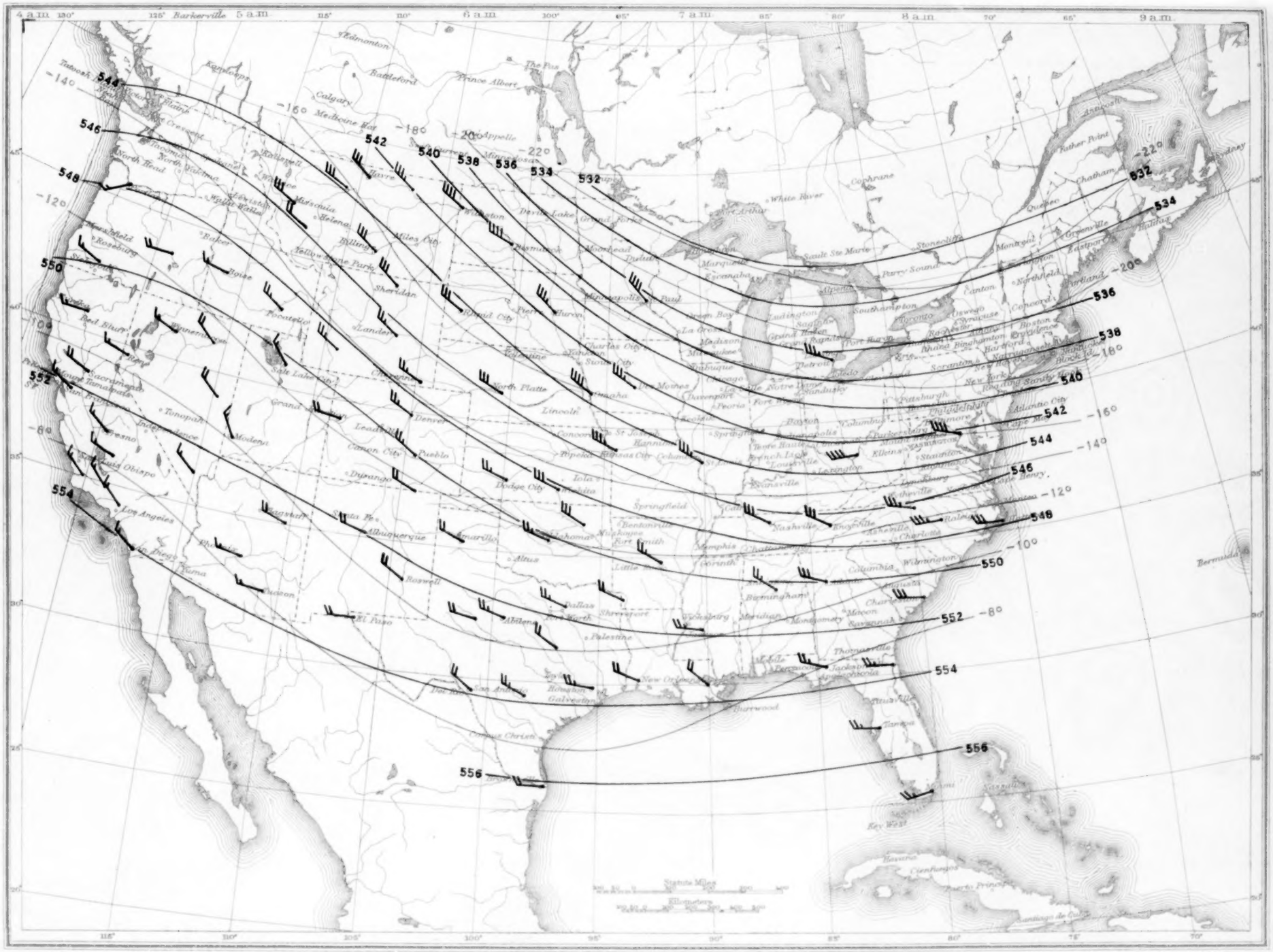


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) November 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

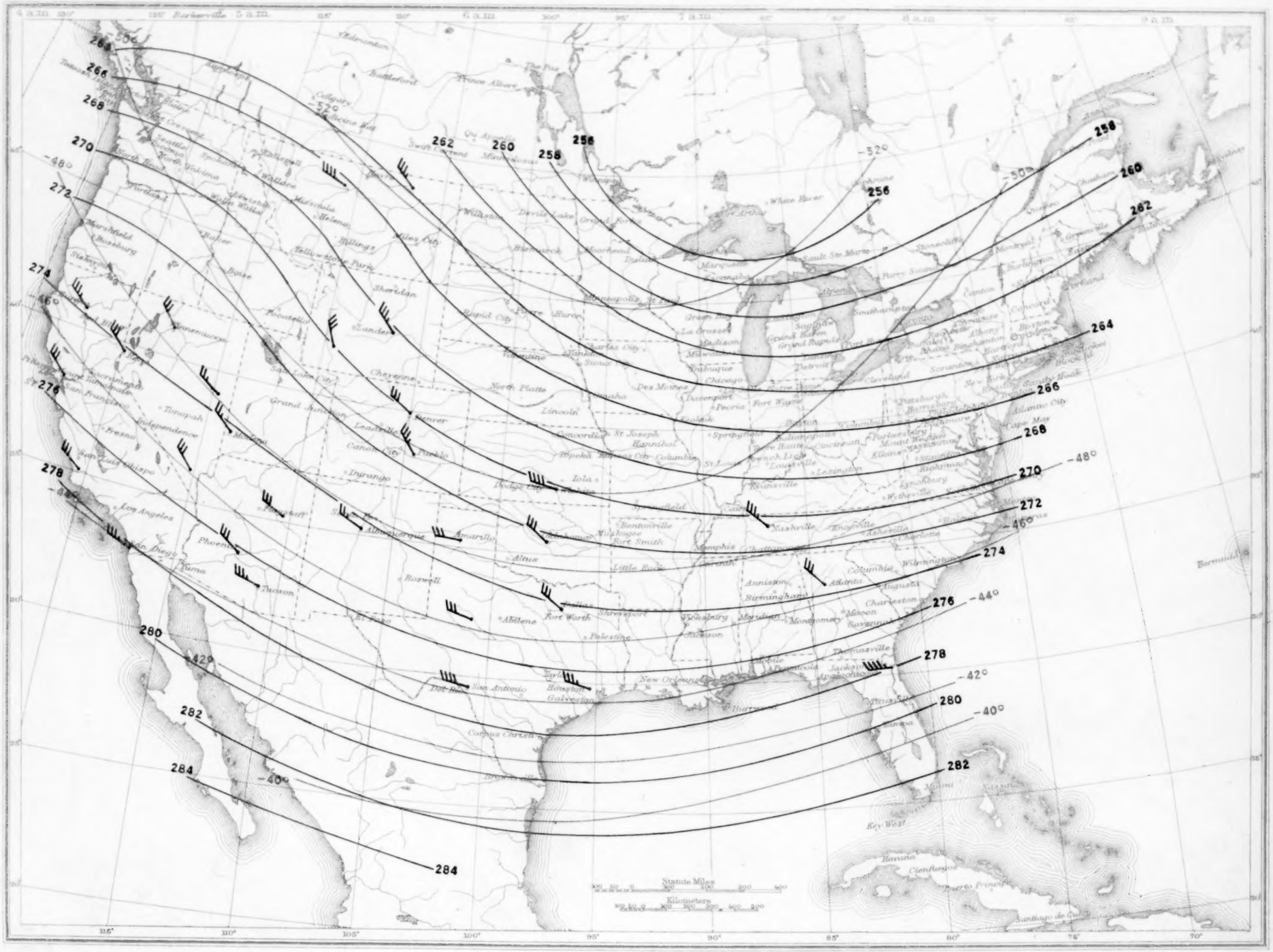


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) December 1943

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) December 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

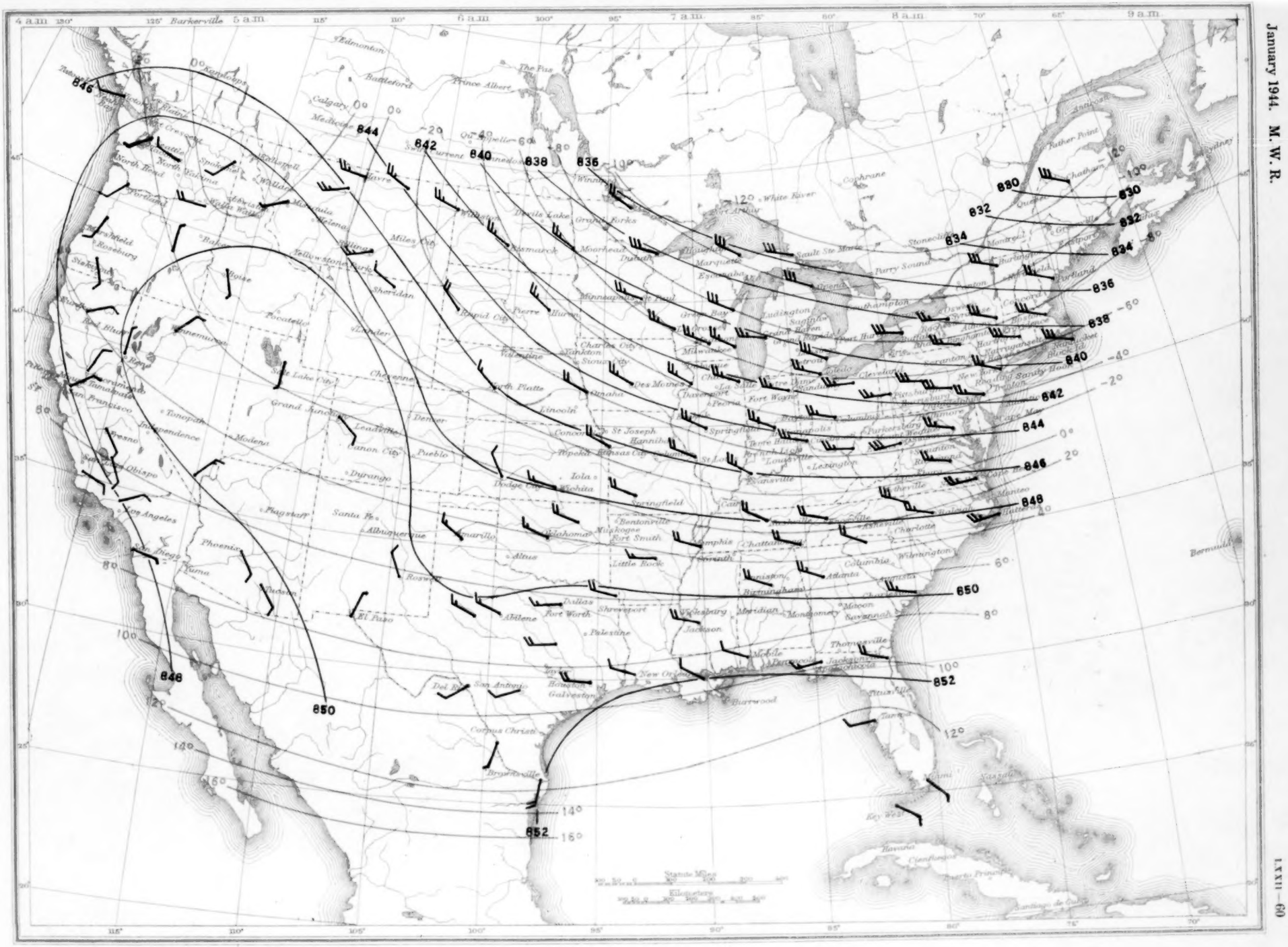


Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) December 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

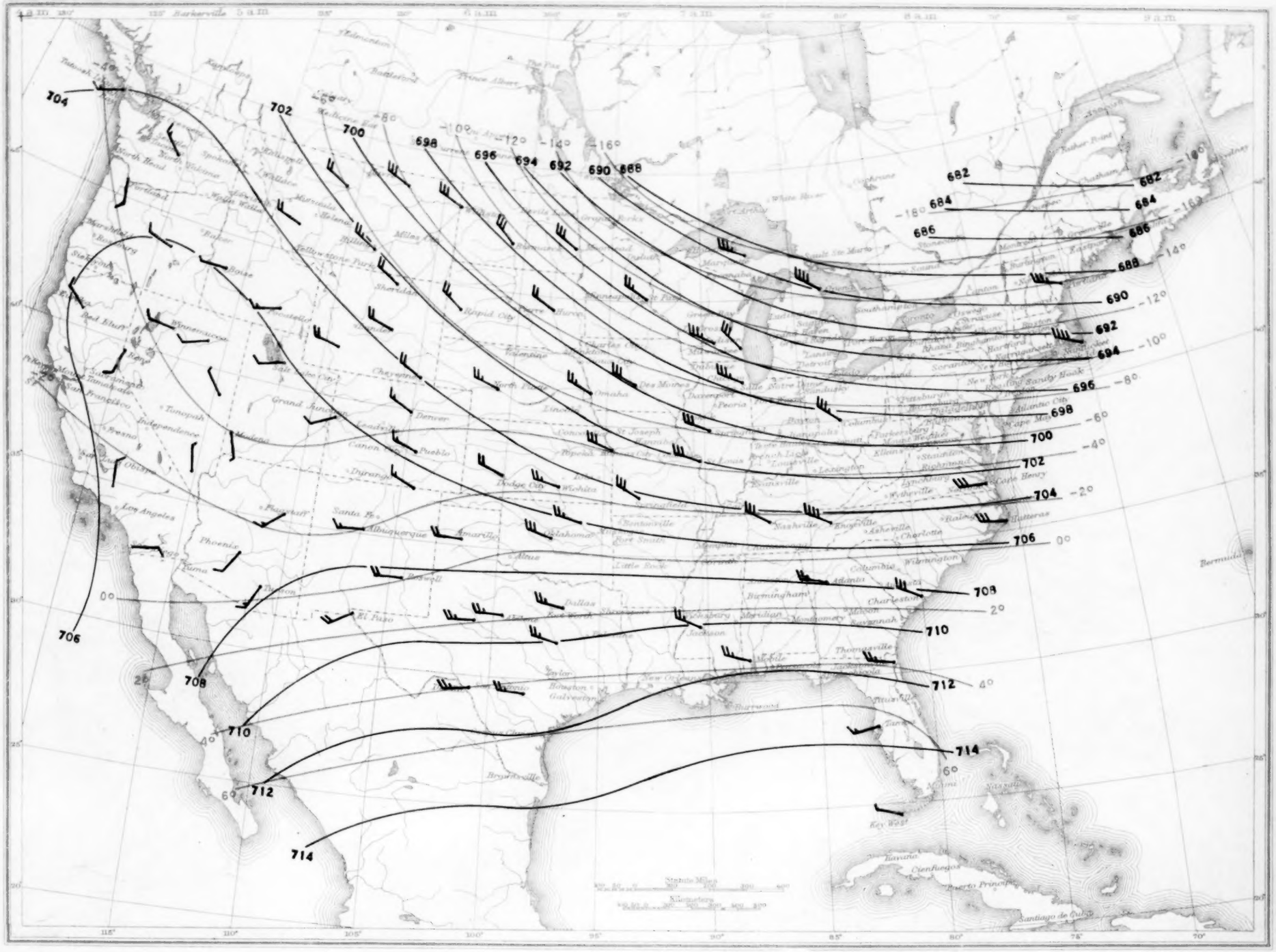


Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) December 1943

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) December 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

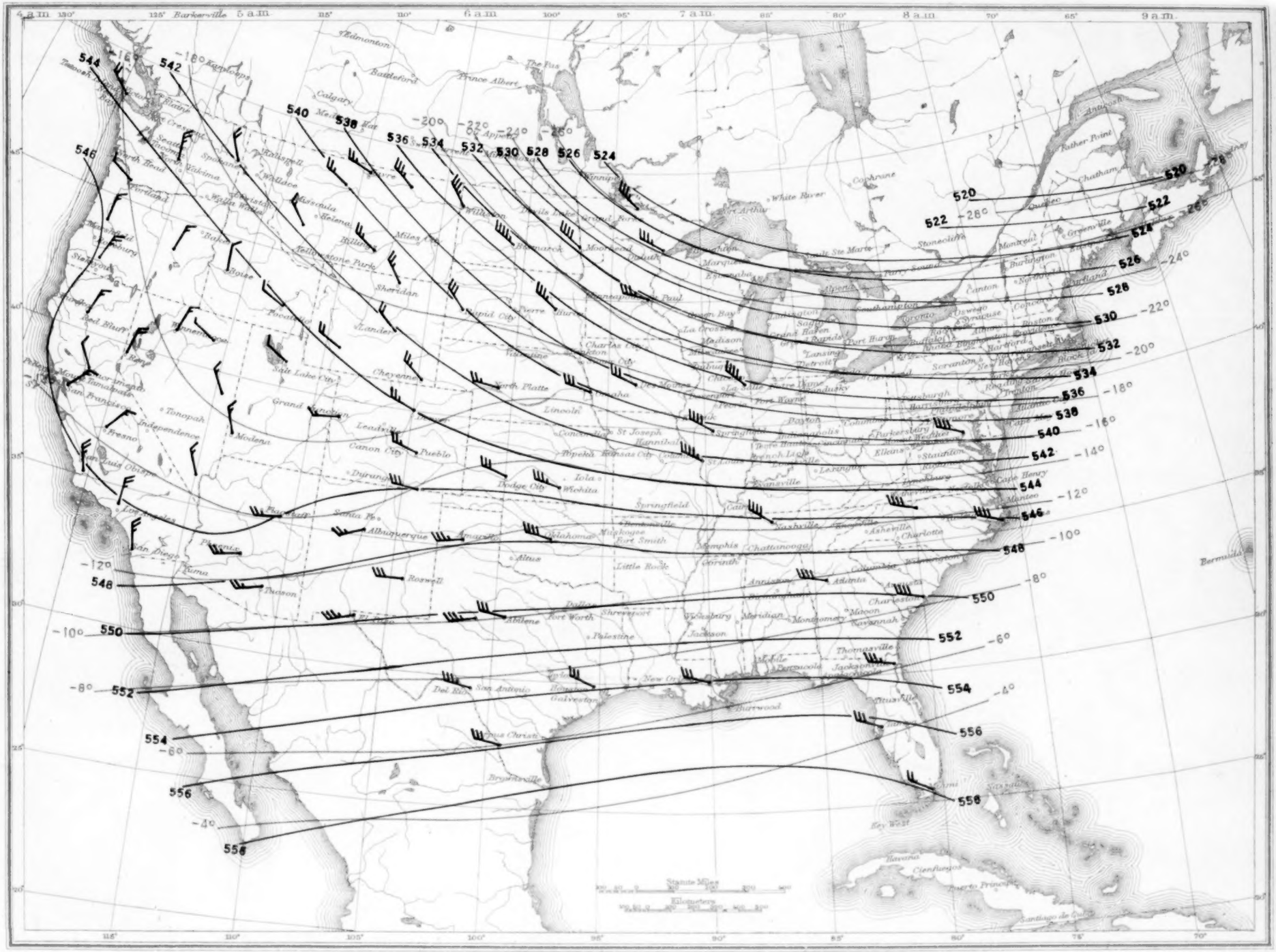
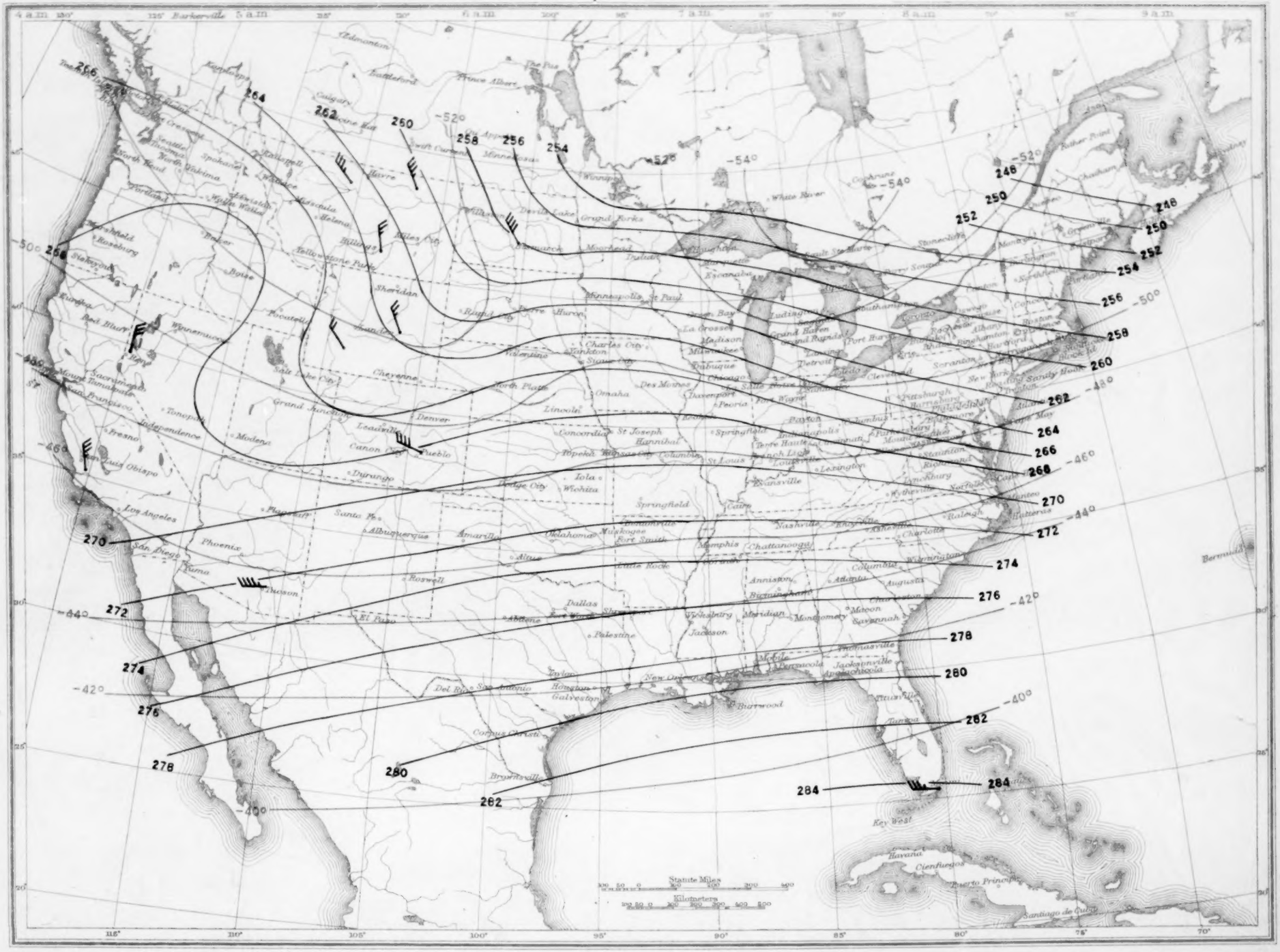


Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) December 1943

Isobars and Isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).